

# **IRISH BIOGEOGRAPHICAL SOCIETY**



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IRISH BIOGEOGRAPHICAL SOCIETY

BULLETIN NO.3

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## EDITORIAL

In introducing Bulletin No.3 the Editorial Committee regrets the delay in dispatching it to members. The postal difficulties over the past few months have delayed the processing of papers and consequently the printing and collation of this issue have in their turn been affected.

Perhaps the most significant event during the past year has been the Society's decision to take part in a survey of a sand-dune ecosystem which is being so generously funded by the Royal Irish Academy. This survey will be carried out over a two-year period during which time both an eastern and western dune system will be studied in detail. It has been agreed by the members of the sub-committee directing the survey to concentrate initially on a site along the east coast and Mizen Head, Co. Wicklow has been chosen for this purpose. It is expected that the dunes at Kincashlough, Co. Donegal, which carries an interesting machair - type vegetation, will be the area in which the second part of the survey will be conducted.

This is an excellent opportunity for all members of the Society to co-operate in producing a composite picture of the structure and dynamics of these two dune areas. A great deal of basic fieldwork, by way of mapping, collecting and listing has yet to be carried out. It is hoped that members are aware of the necessity of this and will, therefore, apply themselves to these tasks with enthusiasm. This is particularly necessary in the initial stages when manpower is most needed.

As evidenced by the reports of the Hare Island meeting, published in Bulletin No.1, the Society has the expertise, manpower and enthusiasm to make this present survey a comprehensive and valuable contribution to our knowledge of the Irish flora and fauna. Members interested in participating should contact any member of the sub-committee, whose names are given in the current Newsletter.

Contributors are reminded that articles for inclusion in the next Bulletin should reach the Editorial Committee not later than the 15th November 1979. Their attention is also drawn to the Suggestions for Authors which appeared in Bulletin No.1 and of which copies are still available on request.

T.G.F. Curtis.

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Editorial Committee

Donald C.F. Cotton  
Tom G.F. Curtis  
Michael B. Quigley  
Daphne Levinge  
Martin C.D. Speight

JAMES NATHANIEL HALBERT : HIS MSS IN THE NATIONAL MUSEUM OF IRELAND

J.P. O'Connor

This is the first paper of an occasional series in which it is intended to publicise the more important entomological collections and MSS of the National Museum in Dublin. The term entomology will be applied in a wider sense than is usual and where appropriate it will encompass such groups as the Myriapoda and Arachnida.

J.N. Halbert was one of Ireland's foremost entomologists. The lists of Irish Hemiptera, Neuroptera (incorporating Ephemeroptera, Odonata, Plecoptera, Psocoptera, Neuroptera (sensu stricto), Megaloptera, Mecoptera, Trichoptera) and Coleoptera which he either wrote himself or in which he co-operated, are still in constant use today (Johnson & Halbert, 1902; King & Halbert, 1910; Halbert, 1935). In addition, he published innumerable short papers and notes on these groups. He also played an important role in the Clare Island Survey, preparing reports on the Hemiptera, Neuroptera (sensu lato), Coleoptera and Acarina (Halbert, 1911; 1912a,b; 1915; Johnson & Halbert, 1912). In his later years, he concentrated almost entirely on the Hydracarina and gained an international reputation for his work on the group. He discovered some 37 species new to science and was the author of several genera. An excellent account of his life and work appears in "B.P.B. and A.W.S." (1948).

Resulting from his service in the National Museum (1892-1923), that institution was fortunate to possess most of the material identified by Halbert prior to 1923. After his death in 1948, his sisters very generously presented the remaining specimens and MSS to the museum. This was an extremely important collection and its fate contrasts with that of the many fine collections which have left Ireland. The National Museum has, therefore, an almost complete collection of the specimens and MSS on which Halbert based his lists. It includes Hemiptera, Coleoptera, Hydracarina and manuscript lists, notes, drawings, etc. The more important items will be now described.

### Correspondence

The letters in the museum cover the period c.1893 to 1947. They are from both Irish and foreign workers and deal mainly with the Hemiptera, Coleoptera and Hydracarina. Many concern the determination of difficult species.

### Orthoptera MS

The museum has a handwritten MS list of Irish Orthoptera.

### Hemiptera MS

There is a titleless hardback notebook with black binding and brown spine (14.5 x 22.5 cm, c.380 pp.). This book is of great interest in that it seems to have formed the basis of the 1935 list. The various species are listed in it along with notes on distribution, habitat, date of capture, misidentifications and other errors, doubtful specimens, key characters used in determinations, sex, etc. As the records were written up, they were deleted.

### Coleoptera MSS

- 1) McNab's (1878) "Fauna of the County of Dublin, and the adjacent part of County Wicklow. Order Coleoptera." annotated by Halbert.
- 2) A small black notebook (11 x 17.5 cm., c.108 pp.) with the pages inserted on rings. It appears to have been used for noting references published after 1900.
- 3) A copy of the 1902 list bound in marbled brown with black corners and spine (14 x 22 cm.). It is interleaved and has been annotated by Halbert, E. O'Mahony and A.W. Stelfox.

### Diptera MS

A MS "List of Irish Diptera" comprising the families Bibionidae, Simuliidae, Chironomidae, Orphenphilidae, Psychodidae, Culicidae, Dixidae, Tipulidae, Rhyphidae and Stratiomyidae. It was compiled from the rearranged (by Halbert) collection of "British" Diptera in the National Museum.

### Hydracarina MSS

- 1) "Other genera notes" (18.5 x 23.5 cm, c.240 pp.). This is an indexed hardbook notebook bound in blue. It contains lists of references in which descriptions occurred. Figures, measurements, and distributions are also noted.
- 2) "HYDRACARINA" (19.5 x 24 cm, c.380 pp.), a hard cover notebook in a brown wrapper. It was employed in the compilation of the 1944 list and covers the period 1899 - 1938. The species taken on each collecting trip are listed. Comments are often made on the identity, colour and structural characters of particular specimens.
- 3) A large notebook (21 x 33 cm, c.380 pp.), in a marbled (yellow and blue) binding with a red spine and with an index, has the following inscriptions "A List of the Irish Freshwater Mites (Hydracarina) J.N. Halbert M.R.I.A.", "Published Sept. 1944 Proc.R.I.Acad.". This book was evidently used during preliminary work on the list and it is well annotated.

### Clare Island Survey MS

A small red paper-back notebook (11.5 x 18 cm, c.80 pp.) exists entitled "Clare Island - Achill - Westport, etc.". It contains notes made during 1909-1913. The entries include lists of species taken in particular localities. Habitat data are also included.

### Malahide MS

A bound copy of R. Southern's MS "Records of Shore - Collecting. Vol.1. The Hut Malahide" contains many annotations made by Halbert. They concern mainly mites.

### Diaries

These are small red paper-back "Eason" diaries (8 x 12.5 cm, c.74 pp.). There is an individual copy for each year and the periods 1905-1910; 1912; 1914-1915; 1923; 1925-1928 and 1930-1936 are represented. The diaries provide a record of when and where he collected specimens.

### Reprints and Books

The Museum has a fine collection of reprints and books on Hydracarina which belonged to Halbert. Many contain notes made by him. Papers on other groups are also present.

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INULA CRITHMOIDES L. AND TRIFOLIUM STRIATUM L. IN THE CORK FLORA

Tony O'Mahony

Inula crithmoides L.

The Golden Samphire was first added to the Cork Flora by R.W. Townsend, who noted it as....."Growing on rocks by the shore near Castlefcreke"... (H3, Power, 1845). It was subsequently seen here by the Rev. T. Allin c. 1870 ("Cotter", in Cusack, 1875), and the station was fortuitously re-discovered in 1933 by L.P.W. Renouf (Renouf, 1934). Unfortunately, none of these botanists mentioned the size of the colony. In 1951, a further six plants were seen on cliffs to the west of Galley Head, in the same area (O'Donovan and O'Regan, 1952), while in June 1976, the late Mrs. Mary Bridges of Castletownsend, informed me that she had found a large colony of the species at Galley Head in 1949.

In late July 1976, the opportunity arose to re-check these stations. On 18.7.1976 a colony of some 50 clumps was found without difficulty on a forty yard stretch of cliff immediately west of the public road termination at Galley Head (H3) W. 340 316. This may well be Mrs. Bridge's station; O'Donovan and O'Regan's record referring, most likely to, an isolated clump further west. On 19.7.1976 a second population was observed growing over some 100 yards of low cliff and rocks, bordering the western end of Owenahincha Beach, Rosscarbery Bay (H3) W. 306 353, some three miles west of Galley Head, and adjacent to Castlefcreke. Upwards of 400 clumps of Inula crithmoides were counted here, in what one is tempted to regard as Townsend's original station, as it agrees with his description. However, the area more usually designated as Castlefcreke, consists of steep, crumbling cliffs slightly east of this station, where a brief inspection failed to reveal the species. It is likely that coastal erosion has been responsible for the demise of any population that might have once grown here.

On 28.7.1976 the lighthouse at Galley Head (W 340 311) was visited and the largest colony to date was found. This consisted of numerous clumps,

with a flowering potential of well over twelve thousand stems, many still in bud. These carpeted the steep cliffs from directly beneath the lighthouse and thence eastwards for some 400 yards. Possibly a more intensive survey would reveal additional colonies in this area, though a final foray westwards from Owenahincha to Rosscarbery Warren, and thence about Downeen Point on the opposite side of the inlet here, produced no further plants. At present then, the entire Cork populations of Inula crithmoides are confined to a three mile stretch of coastal cliff in this part of (H3).

Trifolium striatum L.

This rare Irish clover has hitherto only been recorded from some ten coastal vice-counties, its headquarters being on the east coast. As many of these records were made round about 1900 (cf. Cybele Hibernica 2, 1898), they badly need updating. In June 1976 the clover was found in a single station each in (H3 - H5).

(H5). 3.6.1976. A few plants were found coming into flower on a minute limestone field-outcrop, overlooking Bridgetown Abbey (W 691 995) in N.E. Cork, near the confluence of the Blackwater and Awbeg rivers. The species is new to (H5), this being the first truly inland Irish record though, interestingly, the flora of the limestone cliffs flanking the Blackwater here, is reminiscent of coastal areas, with such species as Parietaria judaica, Rosa pimpinellifolia, Malva sylvestris, Smyrniolus olusatrum, Galium verum etc. Trifolium striatum was in inconspicuous fruit here by 23.6.1976.

(H3). Sherkin Island. 13.6.1976. A few plants were seen on two hedgebanks at the junction of the Post Office/Public House roads, (W 026 256) just above the pier, at the end of a two hour visit to the island. A further brief visit on 20.6.1977 found the clover and associated species scorched, on these well-drained, sun-exposed, rocky banks, therefore its distribution and frequency on the island, still remains to be ascertained.

On the 26.6.1976, Glandore Village, (H3) W 2235 was visited, to check the original Cork station for Trifolium striatum viz: "On the strand at Glandore" - J. Sullivan, in Cybele Hibernica I, 1866. Two 'strands' of boulder-gravel composition occur here; one fronting the village, the other bordering the main road to Glandore bridge. These wave-washed sites with only a paucity of coarse, littoral plants such as Sonchus arvensis and Beta vulgaris ssp. maritima occurring, looked quite unsuitable for the clover, and a diligent search failed to refind it. If it ever grew here, presumably it was in very small numbers.

(H4). Carrigaline. Praeger (1901), gave the following record for the clover: Carrigaline 1900 (Scully) - Phillips. On the 31.6.1976, delightful limestone outcrops about Water Park, on the Owenboy estuary, were firstly examined, in view of this species occasional predilection for calcareous habitats (Scully 1916; Tutin 1968). The clover, though now in a drab, inconspicuous fruiting condition, was re-discovered almost immediately, in the little amphitheatre-like quarry (W 741 627) opposite the church here. A quick search showed it to be fairly frequent on the limestone eastwards to Carrigaline Castle, roughly a 1/4 mile distant. Associated species occurring in abundance here were: Geranium rotundifolium, Calamintha sylvatica subsp. ascendens, Sedum album and Foeniculum vulgare. Among other interesting species seen were: Ophrys apifera, Linum bienne, Phleum bertolonii and some clumps of the capricious Silybum marianum.

The discovery of three Cork stations for Trifolium striatum within the month of June 1976 strongly suggests that the species is under-recorded in Ireland: no doubt the combination of an early flowering season of quite short duration and a drab, inconspicuous fruiting appearance, have been at least partly responsible for the dearth of records to date.

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A CHECKLIST OF IRISH FANNIIDAE AND MUSCIDAE (DIPTERA)

Robert Nash

The Irish species of Fanniidae and Muscidae were recently revised by Nash and Chandler (1978). Since then only two species have been added to the Irish list (Nash, 1977). However, recent work on the Haliday collection suggests that considerable doubt attaches to the true provenance of his specimens labelled "Ireland" by J.N. Halbert when the collection was overhauled in the early part of this century. In this list 5 species which were included as 'certainly Irish' in the 1978 revision are now regarded as only possibly Irish since they were based solely on specimens re-labelled "Ireland" by Halbert (these are marked \*?). This corrected list uses the nomenclature and systematic order as laid out in Kloet and Hincks (1976).

SPECIES LIST

|                            |                             |
|----------------------------|-----------------------------|
| <u>Piezura graminicola</u> | (Zetterstedt, 1846)         |
| <u>Fannia aequilineata</u> | (Ringdahl, 1945)            |
| <u>F. armata</u>           | (Meigen, 1826)              |
| <u>F. canicularis</u>      | (Linnaeus, 1761)            |
| <u>F. coracina</u>         | (Loew, 1873)                |
| <u>F. corvina</u>          | (Verrall, 1892)             |
| <u>F. fuscula</u>          | (Fallen, 1825)              |
| <u>F. genualis</u>         | (Stein, 1895)               |
| <u>F. hamata</u>           | (Macquart, 1835)            |
| *? <u>F. incisurata</u>    | (Zetterstedt, 1838)         |
| <u>F. manicata</u>         | (Meigen, 1826)              |
| <u>F. mollissima</u>       | (Haliday in Westwood, 1840) |
| <u>F. monilis</u>          | (Haliday, 1838)             |
| <u>F. mutica</u>           | (Zetterstedt, 1845)         |
| <u>F. parva</u>            | (Stein, 1895)               |
| <u>F. polychaeta</u>       | (Stein, 1895)               |
| <u>F. postica</u>          | (Stein, 1895)               |
| <u>F. pretiosa</u>         | (Schiner, 1862)             |
| <u>F. rondanii</u>         | (Strobl, 1893)              |

|                                     |                           |
|-------------------------------------|---------------------------|
| <u>F. scalaris</u>                  | (Fabricius, 1794)         |
| <u>F. serena</u>                    | (Fallen, 1825)            |
| <u>F. similis</u>                   | (Stein, 1895)             |
| <u>F. sociella</u>                  | (Zetterstedt, 1845)       |
| <u>F. subsimilis</u>                | Ringdahl, 1934            |
| <u>Achanthiptera rohrelliformis</u> | (Robineau-Desvoidy, 1830) |
| <u>Polietes albolineata</u>         | (Fallen, 1823)            |
| <u>P. hirticrura</u>                | (Meade, 1887)             |
| <u>P. lardaria</u>                  | (Fabricius, 1781)         |
| <u>Mesembrina meridiana</u>         | (Linnaeus, 1758)          |
| <u>Pyrellia ignita</u>              | Robineau-Desvoidy, 1830   |
| <u>Dasyphora cyanella</u>           | (Meigen, 1826)            |
| ?? <u>D. cyanicolor</u>             | (Zetterstedt, 1845)       |
| <u>Orthellia cornicina</u>          | (Fabricius, 1781)         |
| <u>O. viridis</u>                   | (Wiedemann, 1824)         |
| <u>Morellia aenescens</u>           | Robineau-Desvoidy, 1830   |
| <u>M. hortorum</u>                  | (Fallen, 1816)            |
| <u>M. simplex</u>                   | (Loew, 1857)              |
| <u>Musca domestica</u>              | Linnaeus, 1758            |
| <u>M. autumnalis</u>                | Degeer, 1776              |
| <u>Azelia aterrima</u>              | (Meigen, 1826)            |
| <u>A. cilipes</u>                   | (Haliday, 1838)           |
| <u>A. gibbera</u>                   | (Meigen, 1826)            |
| <u>A. macquarti</u>                 | (Staeger, 1843)           |
| <u>A. triquetra</u>                 | (Wiedemann, 1817)         |
| <u>A. zetterstedti</u>              | Rondani, 1866             |
| <u>Thricops hirsutula</u>           | (Zetterstedt, 1838)       |
| <u>T. longipes</u>                  | (Zetterstedt, 1845)       |
| <u>T. nigrifrons</u>                | (Robineau-Desvoidy, 1830) |
| <u>T. nigritella</u>                | (Zetterstedt, 1838)       |
| <u>T. rostrata</u>                  | (Meade, 1882)             |
| <u>T. semicinerea</u>               | (Wiedemann, 1817)         |
| <u>Alloeostylus diaphanus</u>       | (Wiedemann, 1817)         |
| <u>Trichopticoides decolor</u>      | (Fallen, 1824)            |
| <u>Drymeia hamata</u>               | (Fallen, 1823)            |
| *? <u>Ophyra capensis</u>           | (Wiedemann, 1818)         |

|                                   |                     |
|-----------------------------------|---------------------|
| <u>Ophyra leucostoma</u>          | (Wiedemann, 1817)   |
| <u>Hydrotaea albipuncta</u>       | (Zetterstedt, 1845) |
| <u>H. armipes</u>                 | (Fallen, 1845)      |
| <u>H. basdeni</u>                 | Collin, 1939        |
| <u>H. bimaculata</u>              | (Meigen, 1826)      |
| <u>H. cyrtoneurina</u>            | (Zetterstedt, 1845) |
| <u>H. dentipes</u>                | (Fabricius, 1805)   |
| <u>H. irritans</u>                | (Fallen, 1823)      |
| *? <u>H. meteorica</u>            | (Linnaeus, 1758)    |
| <u>H. militaris</u>               | (Meigen, 1826)      |
| <u>H. occulta</u>                 | (Meigen, 1826)      |
| <u>H. similis</u>                 | (Meade, 1887)       |
| <u>Muscina assimilis</u>          | (Fallen, 1823)      |
| <u>M. pabulorum</u>               | (Fallen, 1817)      |
| <u>M. stabulans</u>               | (Fallen, 1817)      |
| <u>Lophosceles cinereiventris</u> | (Zetterstedt, 1845) |
| <u>L. mutatus</u>                 | (Fallen, 1825)      |
| <u>Phaonia basalis</u>            | (Zetterstedt, 1838) |
| <u>P. errans</u>                  | (Meigen, 1826)      |
| <u>P. erronea</u>                 | (Schnabl, 1886)     |
| <u>P. exoleta</u>                 | (Meigen, 1826)      |
| <u>P. fuscata</u>                 | (Fallen, 1825)      |
| ?? <u>P. goberti</u>              | (Mik, 1881)         |
| <u>P. halterata</u>               | (Stein, 1893)       |
| <u>P. incana</u>                  | (Wiedemann, 1817)   |
| ?? <u>P. lugubris</u>             | (Meigen, 1826)      |
| <u>P. mystica</u>                 | (Meigen, 1826)      |
| <u>P. pallida</u>                 | (Fabricius, 1787)   |
| <u>P. palpata</u>                 | (Stein, 1897)       |
| <u>P. perdita</u>                 | (Meigen, 1830)      |
| <u>P. populi</u>                  | (Meigen, 1826)      |
| <u>P. rufipalpis</u>              | (Macquart, 1835)    |
| <u>P. serva</u>                   | (Meigen, 1826)      |
| <u>P. signata</u>                 | (Meigen, 1826)      |
| <u>P. vagans</u>                  | (Fallen, 1825)      |
| <u>P. variegata</u>               | (Meigen, 1826)      |

|                           |                                                    |
|---------------------------|----------------------------------------------------|
| <u>P. viarum</u>          | Robineau-Desvoidy, 1830                            |
| <u>P. vittifera</u>       | (Zetterstedt, 1845)                                |
| <u>Helina abdominalis</u> | (Zetterstedt, 1846)                                |
| <u>H. allotalia</u>       | (Meigen, 1830)                                     |
| <u>H. anceps</u>          | (Zetterstedt, 1838)                                |
| <u>H. atricolor</u>       | (Fallen, 1824)                                     |
| <u>H. consimilis</u>      | (Fallen, 1825)                                     |
| <u>H. cothurnata</u>      | (Rondani, 1866)                                    |
| <u>H. depuncta</u>        | (Fallen, 1825)                                     |
| <u>H. duplicata</u>       | (Meigen, 1826) [includes <u>H. communis</u> auct.] |
| <u>H. fratercula</u>      | (Zetterstedt, 1845)                                |
| <u>H. impuncta</u>        | (Fallen, 1825)                                     |
| <u>H. laetifica</u>       | (Robineau-Desvoidy, 1830)                          |
| <u>H. lasiopthalma</u>    | (Macquart, 1835)                                   |
| <u>H. latitarsis</u>      | Ringdahl, 1924                                     |
| <u>H. maculipennis</u>    | (Zetterstedt, 1845)                                |
| <u>H. obscurata</u>       | (Meigen, 1826)                                     |
| <u>H. parcepilosa</u>     | (Stein, 1907)                                      |
| <u>H. pertusa</u>         | (Meigen, 1826)                                     |
| <u>H. protuberans</u>     | (Zetterstedt, 1845)                                |
| <u>H. pubiseta</u>        | (Zetterstedt, 1845)                                |
| <u>H. quadrimaculella</u> | Hennig, 1958                                       |
| <u>H. quadrinotata</u>    | (Meigen, 1826)                                     |
| <u>H. quadrum</u>         | (Fabricius, 1805)                                  |
| <u>H. setiventris</u>     | Ringdahl, 1924                                     |
| <u>H. subvittata</u>      | (Seguy, 1923)                                      |
| <u>H. vicina</u>          | (Czerny, 1900)                                     |
| <u>Gymnodia humilis</u>   | (Zetterstedt, 1860)                                |
| <u>Hebecnema affinis</u>  | Malloch, 1921                                      |
| <u>H. fumosa</u>          | (Meigen, 1826)                                     |
| <u>H. nigricolor</u>      | (Fallen, 1825)                                     |
| <u>H. umbratica</u>       | (Meigen, 1826)                                     |
| <u>H. vespertina</u>      | (Fallen, 1823)                                     |
| <u>Mydaea ancilla</u>     | (Meigen, 1826)                                     |
| <u>M. anicula</u>         | (Zetterstedt, 1860)                                |
| <u>M. detrita</u>         | (Zetterstedt, 1845)                                |



|                                |                           |
|--------------------------------|---------------------------|
| <u>M. discimana</u>            | Malloch, 1920             |
| <u>M. electa</u>               | (Zetterstedt, 1860)       |
| <u>M. scutellaris</u>          | Robineau-Desvoidy, 1830   |
| <u>M. setifemur</u>            | Ringdahl, 1924            |
| <u>M. tincta</u>               | Zetterstedt, 1845         |
| <u>M. urbana</u>               | (Meigen, 1826)            |
| <u>Myospila mediatubunda</u>   | (Fabricius, 1781)         |
| ?? <u>M. hennigi</u>           | Gregor & Povolny, 1959    |
| <u>Graphomyia maculata</u>     | (Scopoli, 1763)           |
| <u>G. picta</u>                | (Zetterstedt, 1855)       |
| <u>Spilogona aerea</u>         | (Fallen, 1825)            |
| <u>S. brunneisquama</u>        | (Zetterstedt, 1845)       |
| *? <u>S. compuncta</u>         | (Weidemann, 1817)         |
| <u>S. contractifrons</u>       | (Zetterstedt, 1838)       |
| <u>S. denigrata</u>            | (Meigen, 1826)            |
| <u>S. litorea</u>              | (Fallen, 1823)            |
| *? <u>S. marina</u>            | (Collin, 1921)            |
| <u>S. meadei</u>               | (Schnabl, 1915)           |
| <u>S. solitaria</u>            | (Collin, 1921)            |
| <u>S. surda</u>                | (Zetterstedt, 1845)       |
| <u>Villeneuveia aestuum</u>    | (Villeneuve, 1902)        |
| <u>Limnophora riparia</u>      | (Fallen, 1824)            |
| <u>L. maculosa</u>             | (Meigen, 1826)            |
| <u>L. olympiae</u>             | Lyneborg, 1965            |
| <u>L. tigrina</u>              | (Am Stein, 1860)          |
| <u>L. triangular</u>           | (Fallen, 1825)            |
| ? <u>Lispe litorea</u>         | Fallen, 1825              |
| <u>L. pygmaea</u>              | Fallen, 1825              |
| <u>L. tentaculata</u>          | (Degeer, 1776)            |
| <u>Pseudocoenosia abnormis</u> | (Stein, 1916)             |
| <u>P. solitaria</u>            | (Zetterstedt, 1838)       |
| <u>Lispocephala alba</u>       | (Meigen, 1826)            |
| <u>L. erythroceras</u>         | (Robineau-Desvoidy, 1830) |
| <u>L. verna</u>                | (Fabricius, 1794)         |
| <u>Spanochaeta dorsalis</u>    | (Roser, 1840)             |
| <u>Schoenomyza litorella</u>   | (Fallen, 1823)            |

|                               |                         |
|-------------------------------|-------------------------|
| <u>Macrorchis meditata</u>    | (Fallen, 1825)          |
| <u>Allognota agromyzina</u>   | (Fallen, 1825)          |
| <u>Dexiopsis lacteipennis</u> | (Zetterstedt, 1845)     |
| <u>D. lacustris</u>           | Karl, 1930              |
| <u>D. litoralis</u>           | (Zetterstedt, 1846)     |
| <u>D. minutalis</u>           | (Zetterstedt, 1860)     |
| <u>Coenosia albatella</u>     | (Zetterstedt, 1849)     |
| <u>C. allenii</u>             | Fonseca, 1966           |
| <u>C. antennata</u>           | (Zetterstedt, 1849)     |
| <u>C. dubiosa</u>             | Hennig, 1961            |
| <u>C. femoralis</u>           | Robineau-Desvoidy, 1830 |
| <u>C. flavicauda</u>          | Ringdahl, 1932          |
| <u>C. infantula</u>           | Rondani, 1866           |
| <u>C. intermedia</u>          | (Fallen, 1825)          |
| <u>C. lineatipes</u>          | (Zetterstedt, 1845)     |
| <u>C. means</u>               | Meigen, 1826            |
| <u>C. mollicula</u>           | (Fallen, 1825)          |
| <u>C. pedella</u>             | (Fallen, 1825)          |
| <u>C. pumila</u>              | (Fallen, 1825)          |
| <u>C. rufipalpis</u>          | Meigen, 1826            |
| <u>C. sexnotata</u>           | Meigen, 1826            |
| <u>C. tigrina</u>             | (Fabricius, 1775)       |
| <u>C. tricolor</u>            | (Zetterstedt, 1845)     |
| <u>C. verralli</u>            | Collin, 1953            |
| <u>Stomoxys calcitrans</u>    | (Linnaeus, 1758)        |
| <u>Haematobosca stimulans</u> | (Meigen, 1824)          |

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## THE IRISH PALLOPTERIDAE (DIPTERA)

Martin C.D. Speight

So far as I know, no account of the Irish Pallopteridae has been written. The pallopterids are a small group of flies forming one of the hotch-potch of families traditionally consigned to the dipteran group called the "Acalypterae". The inter-relationships of acalypterate families are a matter of controversy. The most recent attack on acalypterate phylogenetic systematics was conducted by Griffiths (1972), who chose to virtually ignore all but characteristics of the genitalia in developing his ideas. The pallopterids suffered from his attention along with the rest and ended up being regarded by him as no more than yet another genus of fruit-fly (Tephritidae). Whether Griffiths' cavalier approach to acalypterate taxonomy is justified has yet to be discussed in any detail by taxonomists. However, the 'demolition job' he carried out on the "Acalypterae" is in general most convincing - as I have argued elsewhere (Speight, 1969) the morphological features used previously to derive major phylogenetic groupings among these fly families are quite unsuitable for the task. In Griffiths' rearrangement the terms "Acalypterae" have disappeared, the constituent families being regrouped in five superfamilies. The largest of these superfamilies, the Muscoidea, contains the "Calypterae" together with most of the "Acalypterae" including the Tephritidae, and hence Palloptera. However, whatever the consensus of opinion proves to be in relation to Palloptera, I do not think the genus will be regarded as correctly placed in the Tephritidae. Palloptera is, in my opinion, as worthy of family status as is Eurygnathomyia (the other erstwhile pallopterid genus), which is regarded by Griffiths (l.c.) as a monotypic family. The pallopterid species recorded in Great Britain are given by Kloet and Hincks (1976), but before the species listed there can be referred to correctly certain nomenclatural changes need to be taken into consideration. A checklist of the Irish species is thus provided here, preceeding the records. Of the 11 Palloptera species named in Kloet and Hincks (l.c.), 10 are now known in Ireland. No other pallopterids are known in Ireland at present. Eurygnathomyia has recently been found in Great Britain (see Cogan & Dear,

1975; Chandler, 1978) and could turn up here.

In the following list the species are given in alphabetical order, and the synonymy follows Morge (1967, 1974).

Checklist of Irish Pallopteridae

PALLOPTERA Fal.

ambusta (Mg.)

campta Cz.

arcuata (Fab.)

?quinquemaculata (Macqt.)

modesta (Mg.)

parallela Lw.

muliebris (Harr.)

saltuum (L.)

scutellata (Macqt.)

neutra Pand.

trimacula (Mg.)

umbellatarum (Fab.)

usta (Mg.)

ustulata Fal.

Species known from Great Britain but not yet found in Ireland

EURYGNATHOMYIA Cz.

bicolor (Zett.)

PALLOPTERA Fal.

laetabilis Lw.

fodori Szilady

All of the Palloptera species referred to above can be determined using the key provided by Collin (1951), but there are additional species in

continental Europe, so it is probably prudent to use the comprehensive key given by Morge(1967) since there may well be more species in the British Isles than are known there at present. The key in Seguy (1934) should not be used. It is more difficult to recognise the genus Palloptera than to determine its species, because a number of them bear a strong general resemblance to members of other families. Thus, P. trimacula looks like the lauxaniid Minettia inusta and P. scutellata resembles various small Heleomyzidae. In Oldroyd (1970), the pallopterids do not appear in the key to families at all, being regarded as Lonchaeidae.

In the following account, only records from the present century are given, except in the case of P. modesta.

Key to abbreviations used in records

- AI - A.G. Irwin
- BC - B. Cogan
- MS - M.C.D. Speight
- PC - P.J. Chandler
- RN - R. Nash
- (B) - specimen in British Entomological and Natural History Society collections, London.
- (N) - specimen in National Museum, Dublin.
- (U) - specimen in Ulster Museum, Belfast.
- (W) - specimen in Washington Museum.

Where the location of a specimen upon which a record is based is not mentioned, the specimen is in the private collections of either Peter Chandler or Martin Speight.

The species : records and notes

P. ambusta (Mg.)

Carlow: 24 July 75, Craiguealug, coll. A. Stubbs, det. PC.

This is a rare species about which little is known.

P. campta Cz.

Antrim: 29 May 72, J.322687 Belfast, hedgerow, coll. RN, det. Al(U).

16 May 75, J.3268 Belfast, Barnett's Pk., coll. & det. Al(U).

28 May 73, J.3067 Belfast, Dixon Pk., coll. & det. Al(U).

4 July 73, D.1549 Rathlin Is., coll. RN, det. Al(U).

Armagh: 5 June 73, J.0461 L. Neagh, Oxford Is., coll. RN, det. Al(U).

Cavan: 28 May 36, Scott's bog, coll. R.C. Faris, det. PC(B).

Clare: 19 May 70, Ballynalacken Castle woods, coll. & det. PC.

Down: 2 June 73, J.4471 Comber, Clydesford Br., riverside, coll. & det. Al(U).

Dublin: 9 Sept 27, Royal Canal, coll. Reilly, det. MS(N).

Galway: 21 May 70, Coole Pk., coll. & det. PC.

Louth: 15 July 71, Flagstaff, coll. & det. PC.

Monaghan: 2 May 76, L. Egish, marshy Salix scrub, lake shore, coll. & det. Jonathan Cole.

Roscommon: 12 May 40, Carrigeenroe, L. Key, coll. R.C. Faris, det. PC(B).

Wexford: 2 June 76, X.9596 Saltee Is., beaten from Acer pseudoplatanus,  
derelict cottage garden, coll. MS, det. BC.

Wicklow: 19 June 19, Powerscourt, coll. J.N. Halbert, det. MS(N).

21 June 75, Glendalough, coll. & det. PC.

In my experience this species is associated with deciduous woodland.

P. modesta (Mg.)

"Ireland" coll. A.H. Haliday, det. MS(N).

Until further specimens of this species turn up in Ireland its presence here must be regarded as doubtful, since the correct origin of Haliday specimens bearing the printed label "Ireland" is open to question (Nash, pers.comm.). According to Collin (1951) the larvae of P. modesta inhabit the flower heads of carline thistles (Carlina vulgaris). The

key provided in Seguy (1934) cannot be used to identify this species.

P. muliebris (Harr.)

Down: 13 Aug 74, J.5985 Copeland Is., in Sambucus grove on Lighthouse Is., coll. & det. AI(U).

P. muliebris, which appears in older literature as Toxoneura muliebris, has been bred from debris found in the workings of beetle larvae in pine bark. It is a very distinctive fly and Haliday's record from Co. Down, published in 1833 as "Ortalis pulchella Rossi", and corrected subsequently (1837) to "Toxoneura fasciata Macqt.", can reasonably be regarded as of this species. It is tempting to postulate that P. muliebris is a relatively recent arrival in Ireland, from across the Mull of Kintyre, implying that the Copeland Isles specimens had just come ashore there, seeing that conifers are absent from Lighthouse Is.! However, it is also possible that this fly can complete its life history in deciduous trees. The total lack of records of such a noticeable insect from elsewhere in Ireland than Co. Down is puzzling.

P. saltuum (L.)

Antrim: 12 June 75, D.2340 Torr Hd., coastal meadow, coll. RN, det. AI(U).

Kildare: 24 June 51, Landenstown, coll. A.W. Stelfox, det. PC(W).

Mayo: 15 June 09, Westport, coll. P. Grimshaw, det. MS(U).

Meath: 19 June 77, N.9757, malaise trap, woodland strip by stream, coll. & det. MS.

Wexford: 2 June 76, X.9596 Saltee Is., beaten from Acer pseudoplatanus, garden of derelict cottage, coll. MS, det. PC.

Wicklow: 19 June 78, O.2606, beaten, mixed woods by stream, coll. & det. MS.

This is probably a widely distributed and common fly in Ireland, frequenting damp woodland and hedgerows where may be found the umbellifer (Heracleum) in which its larvae develop.

P. scutellata Macqt.

Dublin: 18 April 71, O.1927, swept, scrub-invaded boggy pasture, coll. & det. MS(N).



- Galway: 26 March 75, L.8349, beaten from conifer, trackside, mixed woods on boggy hillside, coll. MS, det. BC.
- Kerry: 16 Oct 73, Derrycunihy, on rushes in oak wood, coll. & det. PC.
- Laois: 4 May 77, N.5705, swept, Salix, Juncus, etc., partly drained valley bog within mixed woods. coll. & det. MS.
- Leitrim: 2 Oct 77, Glencarr waterfall, coll. & det. PC.
- Wicklow: 19 June 78, 0.2606, beaten mixed woods by stream, coll. & det. MS.

P. scutellata is apparently a divoltine species, occurring early in the spring and late in the autumn. Its larvae develop in Juncus (Peter Chandler, pers.comm.), so it is likely to be generally distributed here.

P. trimacula Macq.

- Fermanagh: 27 Aug 72, Inishmakill Is., on umbels, coll. C. Reid, det. AI(U).  
29 Aug 72, Crevinishaughy Is., on umbel, coll. C. Reid, det. AI(U).
- Laois: 4 Aug 78, N.5705, beaten, mixed woods, coll. & det. MS.
- Wicklow: 27 Aug 78, 0.1020, swept, marsh by reservoir, coll. & det. MS.  
19 June 78, 0.2606, beaten, mixed woods by streams, coll. & det. MS.  
11 Aug 78, 0.2117, deciduous woods by stream, coll. & det. MS.  
12 Sept 78, T.2980, beaten, Salix carr on fen, coll. & det. MS.

This fly is primarily a wetland species, found in fen carr and along stream margins. Its larvae are associated with the umbellifer Angelica.

P. umbellatarum (Fab.)

- Antrim: 28 June 75, J.3167 Belfast, stream bank near large trees, coll. R. Nash, det. AI(U).
- Cork: 28 June 69, Tobar Ghobhratan, coll. & det. PC.
- Donegal: 10 Aug 78, C.0018, beaten, deciduous woods by lake, coll. & det. MS.
- Down: 18 Aug 74, J.4165 Ballygowan, beside pond, coll. & det. AI(U).  
17 May 69, Stormont, coll. & det. AI(U).  
6 July 74, J.4935 Dundrum, swept from Urtica, coll. C. Reid, det. AI(U).  
13 Aug 74, J.5985, Copeland Is., among Sambucus on Lighthouse Is., coll. & det. AI(U).
- Dublin: 17 June 42, Glenasmole, coll. A.W. Stelfox, det. PC(W).

- Kildare: 24 June 51, Landenstown, coll. A.W. Steifox, det. PC(W).  
Wicklow: 19 June 78, 0.2606, beaten, mixed woods by stream, coll.& det.MS.  
22 July 40, Powerscourt, coll. B.P. Beirne, det. PC(B).  
2 Aug 78, 0.2117, beaten, deciduous woods by stream, coll.& det.MS.  
9 July 69, Glendalough, coll. & det. PC.

The larvae of P. umbellatarum are known to develop in the flower-heads of thistles (Carlina and Cirsium spp.). The species is most commonly met with in woodland localities. Specimens of this species cannot be identified correctly using the key in Seguy (1934), where P. umbellatarum is distinguished by the character "Nervure anale (1A) sans tache brune". The first anal vein does bear a brown spot in P. umbellatarum (Mg.)

Indeed, in Seguy's (l.c.) key, specimens of P. modesta (Mg.) would identify as P. umbellatarum, since P. modesta does not have any marking on the first anal vein, but is otherwise very similar to P. umbellatarum (Seguy's photo of the wing of P. umbellatarum is in fact a wing of P. modesta). In P. umbellatarum the mesopleur are quite bare, whereas in P. modesta they are covered in fine hairs.

P. usta (Mg.)

- Wicklow: 23 Aug 78, T.1985, beaten, mixed woods, coll. M. deC. Williams, det. MS.

According to Collin (1951) this is a northern species in Great Britain, and is known to be associated with carline thistle (Carlina vulgaris).

P. ustulata Fal.

- Down: 12 Sept 82, Bangor, garage windows, coll. C. Reid, det. Al(U).  
13 Aug 74, J.5985, Copeland Is., in grove of Sambucus on Lighthouse Is., coll. & det. Al(U).  
Dublin: 20 July 78, 0.2423, beaten, Alnus/Salix scrub by stream, coll. & det. MS.  
Kildare: 11 July 71, Ardscoil Mote, coll. & det. PC.  
Meath: 16 July 71, bank of R. Boyne near Hays, coll. & det. PC.  
Wicklow: Sept 09, L. Dan, coll. J.N. Halbert, det. MS(N).  
11 Aug 78, 0.2117, beaten, deciduous woods by stream, coll.& det.MS.

This small, frail fly is another species of deciduous woods, which also occurs in gardens.

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A CHECKLIST OF THE IRISH SCIOMYZIDAE (DIPTERA)

Martin C.D. Speight

Chandler (1972) produced a most useful account of the Irish Sciomyzidae which unfortunately is not readily available in Ireland. Since then five additional species have been recorded from Ireland (see Nash, 1975; Speight et al., 1977; Speight et al., in press; Withers, in press) and a small number of nomenclatural changes (see Kloet et al., 1976; Elberg et al., 1978) has occurred that affect Irish species. The Irish sciomyzid fauna is also interesting, with nearly all the species being readily identifiable using Knutson et al. (1965). For these various reasons it seems worthwhile to produce a checklist of the Irish species, in the hope that this will encourage the study of these flies. In the following list, the published records and nomenclatural changes mentioned above have been taken into account, the genera and species being listed in alphabetical order, with synonyms indented. Species which seem to be particularly rare or local in Ireland are asterisked, but it is debateable whether the few records for these species reflect real scarcity or difficulty to capture.

ANTICHAETA

\*analis (Mg., 1830)

COLOBAEA

\*bifasciella (Fal., 1820)

\*punctata (Lundbeck, 1923)

COREMACERA

tristis (Harr., 1780)

marginata (Fab., 1781)

DICTYA

umbrarum (L., 1761)

ELGIVA

cucularia (L., 1767)

HYDROMYA

dorsalis (Fab., 1798)

KNUTSONIA

albiseta (Scop., 1763)

lineata (Fal., 1820)

LIMNIA

unguicornis (Scop., 1763)

PHERBELLIA

albocostata (Fal., 1820)

\*argyra Verbeke, 1966

brunnipes Mg., 1838

cinerella (Fal., 1820)

PHORBELLIA(continued)

dubia (Fal., 1820)

griseola (Fal., 1820)

fuscipes (Macqt., 1835)

\*griseus (Mg., 1820)

knutsoni Verbeke, 1966

nana (Fal., 1820)

\*pallidiventris (Fal., 1820)

punctata (Fab., 1794)

schoenherri (Fal., 1826)

scutellaris (von Ros., 1840)

ventralis (Fal., 1820)

PHORBINA

coryleti (Scop., 1763)

PSACADINA

\*zernyi Mayer, 1953

PTEROMICRA

angustipennis (Staeg., 1845)

\*glabricula (Fal., 1820)

RENOCERA

pallida (Fal., 1820)

\*striata (Mg., 1830)

SALTICELLA

\*fasciata (Mg., 1830)

SCIOMYZA

\*dryomyzina Zett., 1846

SEPEDON

sphegea (Fab., 1775)

spinipes (Scop., 1763)

TETANOCERA

arrogans (Mg., 1830)

elata (Fab., 1781)

ferruginea Fal., 1820

freyi Stack., 1963

fuscinervis (Zett., 1838)

unicolor Lw., 1847

hyalipennis von Ros., 1840

phyllophora Melander, 1920

\*punctifrons Rond., 1868

robusta Lw., 1847

\*sylvatica Mg., 1830

TETANURA

pallidiventris (Staeg., 1845)

TRYPETOPTERA

punctulata (Scop., 1763)

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I am most grateful to Phil Withers for making known to me his capture of Colobaea punctata in Ireland, so that the species could be included in this list.

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## A CHECKLIST OF IRISH TACHINIDAE (DIPTERA)

Robert Nash

The Tachinidae form a well-defined group of calyptrate Diptera whose larvae are internal parasites of various arthropods. Recorded hosts include spiders, centipedes, woodlice, various developmental phases of Coleoptera, Hemiptera, Orthoptera and Dermaptera and the larvae of Hymenoptera and Diptera; however, the Tachinidae predominantly parasitise the larvae of butterflies and moths (Lepidoptera). Colyer and Hammond (1968 pp.257 - 273) provide an excellent general account of the family with illustrations of the more striking species.

A "definitive" faunistic work on the Tachinidae is currently in preparation (Nash, Chandler and Irwin) but this will not be published for some time. In the interim the following systematic checklist is offered. The nomenclature and systematic order follow Kloet and Hincks (1976). Since this differs substantially from that in van Emden (1954), which is the standard work for the identification of the species occurring in the British Isles, I have given the appropriate "van Emden" synonym after the "Kloet and Hincks" name.

The checklist is based on specimens housed in the National Museum of Ireland (Dublin); the British Museum (Natural History) (London); the British Entomological and Natural History Society Collections (London); the Royal Scottish Museum (Edinburgh); the Hope Department of Entomology (University of Oxford); the Smithsonian Institute (Washington) and the Ulster Museum (Belfast). No species is admitted as Irish unless either Chandler, Irwin or Nash have seen specimens\*. A number of records in the relevant literature (all of which have been seen) proved to be based on mis-determinations. So far as I am aware the checklist given here is complete to October 1978. However, since there are only 51 confirmed Irish species, as opposed to 233 confirmed as British, further additions may be anticipated.

\* Key works used to determine the material on which this list is based are cited under references and bibliography



Species List

Phasiinae

Alophora (Alophora) hemiptera (Fabricius, 1794).

Alophora (Alophorella) obesa (Fabricius, 1798).

Gymnosoma rotundatum (Linnaeus, 1758).

Cylindromyia brassicaria (Fabricius, 1775)  $\equiv$  Ocyptera brassicaria

Lophosia fasciata Meigen, 1824.

Dufouriinae

None.

Dexiinae

Prosenia siberita (Fabricius, 1775).

Tachininae

Athrycia trepida (Meigen, 1824)  $\equiv$  Voria (Athrycia) trepida

Eriothrix rufomaculata (Degeer, 1776)

Thelaira nigripes (Fabricius, 1794)

Dexiosoma caninum (Fabricius, 1781)

Macquartia (Bebricia) praefica (Meigen, 1824)

Macquartia (Macquartia) dispar (Fallen, 1820)

Pelatachina tibialis (Fallen, 1810)

Bithia spretta (Meigen, 1824)

Lypha dubia (Fallen, 1810)

Lydina aenea (Meigen, 1824)

Linnaemyia vulpina (Fallen, 1810)

Gymnocheta viridis (Fallen, 1810)  $\equiv$  Gymnochaeta viridis

Ernestia rudis (Fallen, 1810)

Eurithia anthophila (Robineau-Desvoidy, 1830)  $\equiv$  Ernestia radicum  
auctt. nec. Linnaeus, 1758

Eurithia connivens (Zetterstedt, 1844)  $\equiv$  Ernestia connivens

Eurithia consorbrina (Meigen, 1824)  $\equiv$  Ernestia consorbrina (Meigen, 1824)

Tachina fera (Linnaeus, 1761)  $\equiv$  Echinomyia fera

Tachina grossa (Linnaeus, 1758)  $\equiv$  Echinomyia grossa

Triarthria spinipennis (Meigen, 1824)  $\equiv$  Dignochaeta spinipennis

### Goniinae

Actia crassicornis (Meigen, 1824)

Actia lamia (Meigen, 1838)

Siphona spp. ? /sp. ?

Adequate keys/reference material for the determination of Siphona species are not available to me at present so I am unable to list the Irish species, but I believe at least two species are represented here.

Medina collaris (Fallen, 1820)  $\equiv$  Degeeria collaris

Policheta unicolor (Fallen, 1820)  $\equiv$  Perichaeta unicolor

Zaira cinerea (Fallen, 1810)  $\equiv$  Vivania cinerea

Bessa selecta (Meigen, 1824)  $\equiv$  Ptychomyia selecta

Exorista (Adenia) rustica (Fallen, 1810)  $\equiv$  Tachina rustica

Exorista (Exorista) fasciata (Fallen, 1820)  $\equiv$  Tachina fasciata

Exorista (Exorista) larvarum (Linnaeus, 1758) sensu auctt.

$\equiv$  Tachina larvarum

Exorista (Exorista) grandis (Zetterstedt, 1844)  $\equiv$  Tachina sorbillans:  
auctt. nec Wiedemann, 1830

Aplomya confinis (Fallen, 1820)  $\equiv$  Zenillia (Aplomya) confinis

Cyzenis albicans (Fallen, 1810)  $\equiv$  Zenillia (Cyzenis) albicans

Gonia capitata (Degeer, 1776)

Gonia ornata (Meigen, 1826)

Gonia picea (Robineau-Desvoidy, 1830)  $\equiv$  Gonia sicula Robineau-Desvoidy

Pales pavida (Meigen, 1824)

Platyma fimbriata (Meigen, 1824)  $\equiv$  Zenillia (Platymia) fimbriata

Thelymorpha marmorata (Fabricius, 1805)  $\equiv$  Histochoeta marmorata

Carcelia (Carcelia) excavata (Zetterstedt, 1844)

$\equiv$  Carcelia gnava : auctt., nec Meigen, 1824

Carcelia lucorum (Meigen, 1824)

Epicamponera succincta (Meigen, 1824)  
Lydella stabulans (Meigen, 1824) Paraphorocera stabulans  
Phebellia glirina (Rondani, 1859) Zenillia glirina  
Phebellia villica (Zetterstedt, 1838) Zenillia vicina (Wainwright, 1940)  
Phryxe nemea (Meigen, 1824) Zenillia nemea  
Phryxe vulgaris (Fallen, 1810) Zenillia vulgaris

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A NOTE ON THE FLORA OF THE LOUGH CORRIB REGION INCLUDING SOME NEW RECORDS  
FOR WEST GALWAY (H16), NORTH-EAST GALWAY (H17) AND SOUTH MAYO (H26).

Cilian Roden

Lough Corrib is for the greater part surrounded by Carboniferous limestone, outcrops of which are common along its shores. Many plants that are typical Burren species also occur on these outcrops. Good examples include Gentiana verna L., Sesleria caerulea (L.) Ard. and Geranium sanguineum L. In spite of its floristic richness, the area (to judge by published accounts) does not appear to have been well worked by present day botanists and an important record of Praeger's (1934) for the shrub Potentilla fruticosa L., in North east Galway and South Mayo does not appear to have been confirmed since (Scannell & Synnott, 1972). Details of the present status of the species in Praeger's original stations by the shores of Lough Corrib are presented along with a new vice county record of a local shrub, Frangula alnus Miller for North east Galway which is also characteristic of limestone outcrops in the Lough Corrib area.

Large areas of hazel scrub and ash-hazel wood occur in the region and these contain a rich woodland flora including species such as Aquilegia vulgaris L., Neottia nidus - avis (L.) Rich. and Melica uniflora Retz. as well as the more common woodland herbs. However it appears that these habitats have not been thoroughly surveyed hithertofore and in this note new vice county records of four woodland plants are presented, including the rare saprophyte Monotropa hypopitys agg. as well as two other heterotrophic species; Orobanche hereræ Duby., Lathraea squamaria L. and the orchid Epipactis helleborine L. (Cranz.).

This note emphasises the botanical richness of the area which, in my opinion, is still unappreciated by many botanists. Areas of especial interest include the north side of Ballinaduff Bay (M29 41) where I have seen a species of Viola with leaves resembling those of V. persicifolia Schreber a large area of mature ash-hazel wood to the west of Annaghdown (M 27 38). The country east of Ballycurrin

(M 21 49) contains areas of juniper scrub and fens and marshes. These sites and many others need to be investigated especially as drainage schemes are about to commence which will inevitably affect the distribution of some plants. I have already surveyed the flora of some of the islands of Lough Corrib which will be published shortly (Roden, in press).

In the following list, species are arranged in accordance with the nomenclature and order used in Scannell and Synnott (1972).

Potentilla fruticosa L.

- (i) At Greenfields (M 19 46) frequent along 200 m. of shore, in grazed grassland near the winter high water mark. 9th June, 1975.
- (ii) Ballynatty Bay (M 20 51) north of Ballycurrin, infrequent in ungrazed Schoenus fen. 21st May, 1974.

Both stations appear to be parts of a continuous fringe of the species along the lake shore. Praeger (1934) describes this station but apparently it has not been re-visited since 1930 (Scannell & Synnott, 1972).

Frangula alnus Miller.

On rocky limestone shores of Lough Corrib around Cairgin Bay (M 22 42) and Ballinaduff Bay (M 29 41) infrequent. 18th May, 1974. NCR for North east Galway H17.

Monotropa hypopitys agg.

In Hazel scrub on Illaunmahon, Lough Corrib (M 25 37) very rare. 19th August, 1974.

A specimen has been lodged in the Herbarium of the DNB. NCR H16.

Lathraea squamaria L.

In mixed woodland on the north shore of Cairgin Bay, locally frequent. 22nd April, 1975. NCR H17.

Orobanche hederæ Duby.

In ash-hazel woods, growing in shaded areas with Hedera helix L.  
It occurs at the following stations; Illaunaneel west (M 26 38)  
19th August 1974, Cairgin Bay (M 22 42). 24th August, 1975. NCR H17.

Epipactis helleborine L. (Cranz.)

Growing in very shaded parts of ash-hazel woods; it has been found in  
the following localities; Goat Island (M 27 39), woods around Cairgin  
Bay (M 23 42). 8th June, 1974. NCR H17.

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## A CHECKLIST OF IRISH LAND AND FRESHWATER MOLLUSCA

Helena Ross

The taxonomy and nomenclature of British and Irish species of land and freshwater Mollusca was recently updated by Waldén (1976) and Kerney (1976a) in connection with the 'Atlas of the non-marine Mollusca of the British Isles' produced jointly by the Conchological Society of Great Britain and Ireland and the Biological Records Centre (Kerney, 1976b). This was necessary to harmonise nomenclature currently in use in Europe and to facilitate the development of distribution recording schemes proposed for Europe. Since a fairly large number of generic names and some specific names have now changed and since there have been some status changes, a revised Irish checklist would seem to be a useful publication at this time. In this paper the nomenclature follows Waldén (1976) and Kerney (1976a) with the exception of Limax pseudoflavus Evans, 1978 (see Evans 1978a & b). This taxon was mis-determined by Chatfield (1976) as L. grossui Lupu 1970 = L. hibernicus, Kerney (1978b) nomen nudum. Also included is information on additions, verifications and extensions of the known range of species since the publication of the Atlas together with an appended list of collections and useful publications.

### Status and Range Changes

Since publication of the Atlas two snails of a doubtful Irish status have been verified as Irish. Pomatias elegans (Müller, 1774), the land winkle, has now been confirmed as Irish: a colony was discovered in 1976 in Co. Clare (Platts, 1976). Most previous records of this species for Ireland had been based on dead material and its inclusion in Irish lists was therefore formerly open to considerable doubt. The glass-snail Oxychilus helveticus (Blum, 1881) has also been added to the Irish list (Kerney, 1978) have been found in large numbers at several sites in Co. Limerick. Earlier Irish records of this species were based on erroneous determinations. Extensions of the known ranges of several species include: Boetgoerilla pallens Simroth 1912, first recorded from Ireland, Co. Down in 1973 has now been found in



Co. Antrim: Semilimax pyrenaicus (Ferussac 1819), a species absent from Britain and thought to be rather localised in Ireland has produced further records from Co. Tyrone and Co. Wicklow which represent considerable extensions of known range for this species: Cochlodina laminata (Montagu 1803), an old deciduous woodland species has now been recorded from Co. Offaly. This species is much rarer in Ireland than in England almost certainly due to lack of suitable habitats. Cernuella virgata (de Costa 1778) which in the north of Ireland was only previously known from a few north-eastern coastal sites, has been recorded from East Donegal at Rosstown Strand. Arion lusitanicus Mabilie 1868 the "Lusitanian" slug which was known only from five vice-counties up to 1976, has now been recorded from two more vice-counties, East Donegal and Co. Tyrone. Pyramidula rupestris (Draparnaud, 1801) has recently been found at Castlederg, Co. Tyrone, a locality separated by some twenty miles from the species' nearest habitats on the Fermanagh limestone. Of the fresh and brackish water species Anodonta anatina (Linnaeus, 1758), another species which is much rarer in Ireland than in England, has been recorded in 1977 from L. Erne, Co. Fermanagh. Recent records of two species have, surprisingly, extended their range into 'highland zones' - Anodonta cygnea (Linnaeus, 1758) has been found at L. Fern, West Donegal and Lymnaea stagnalis (Linnaeus, 1758) at Fanad, West Donegal.

# Checklist

| FAMILY      | SPECIES                                                                                                                                                                                      |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pomatidae   | <u>Pomatias elegans</u> (Müller, 1774)                                                                                                                                                       |
| Aciculidae  | <u>Acicula fusca</u> (Montagu, 1803)                                                                                                                                                         |
| Ellobiidae  | <u>Carychium minimum</u> Müller, 1774<br><u>Carychium tridentatum</u> (Risso, 1826)                                                                                                          |
| Succineidae | <u>Catinella arenaria</u> (Bouchard-Chantreaux, 1837)<br><u>Succinea putris</u> (Linnaeus, 1758)<br><u>Succinea oblonga</u> Draparnaud, 1801<br><u>Oxyloma pfeifferi</u> (Rossmassler, 1835) |



|               |                                                  |
|---------------|--------------------------------------------------|
| Cochlicopidae | <u>Cochlicopa lubrica</u> (Müller, 1774)         |
|               | <u>Cochlicopa lubricella</u> (Porro, 1838)       |
| Pyramidulidae | <u>Pyramidula rupestris</u> (Draparnaud, 1801)   |
| Vertiginidae  | <u>Columella edentula</u> (Draparnaud, 1805)     |
|               | <u>Columella aspera</u> Waldén, 1966             |
|               | <u>Truncatellina cylindrica</u> (Férussac, 1807) |
|               | <u>Vertigo pusilla</u> Müller, 1774              |
|               | <u>Vertigo antivertigo</u> (Draparnaud, 1801)    |
|               | <u>Vertigo substriata</u> (Jeffreys, 1833)       |
|               | <u>Vertigo pygmaea</u> (Draparnaud, 1801)        |
|               | <u>Vertigo moulinsiana</u> (Dupuy, 1849)         |
|               | <u>Vertigo lilljeborgi</u> (Westerlund, 1871)    |
|               | <u>Vertigo geyeri</u> Lindholm, 1925             |
|               | <u>Vertigo angustior</u> Jeffreys, 1830          |
| Pupillidae    | <u>Pupilla muscorum</u> (Linnaeus, 1758)         |
|               | <u>Leiostylis anglica</u> (Wood, 1828)           |
|               | <u>Lauria cylindracea</u> (da Costa, 1778)       |
| Valloniidae   | <u>Vallonia costata</u> (Müller, 1774)           |
|               | <u>Vallonia pulchella</u> (Müller, 1774)         |
|               | <u>Vallonia excentrica</u> Sterki, 1892          |
|               | <u>Acanthinula aculeata</u> (Müller, 1774)       |
|               | <u>Spermodea lamellata</u> (Jeffreys, 1830)      |
| Enidae        | <u>Ena obscura</u> (Müller, 1774)                |
| Endodontidae  | <u>Punctum pygmaeum</u> (Draparnaud, 1801)       |
|               | <u>Discus rotundatus</u> (Müller, 1774)          |
| Arionidae     | <u>Geomalacus maculosus</u> Allman, 1843         |
|               | <u>Arion ater</u> (Linnaeus, 1758)               |
|               | <u>Arion lusitanicus</u> Mabilie, 1868           |
|               | <u>Arion subfuscus</u> (Draparnaud, 1805)        |
|               | <u>Arion circumscriptus</u> Johnston, 1828       |
|               | <u>Arion silvaticus</u> Lohmander, 1937          |
|               | <u>Arion fasciatus</u> (Nilsson, 1823)           |
|               | <u>Arion hortensis</u> Férussac, 1819            |
|               | <u>Arion intermedius</u> Normand, 1852           |

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vitrinidae    | <u>Vitrina pellucida</u> (Müller, 1774)<br><u>Semilimax pyrenaicus</u> (Férussac, 1821)                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Zonitidae     | <u>Vitrea crystallina</u> (Müller, 1774)<br><u>Vitrea contracta</u> (Westerlund, 1871)<br><u>Nesovitrea hammonis</u> (Strom, 1765)<br><u>Aegopinella pura</u> (Alder, 1830)<br><u>Aegopinella nitidula</u> (Draparnaud, 1805)<br><u>Oxychilus draparnaudi</u> (Beck, 1837)<br><u>Oxychilus cellarius</u> (Müller, 1774)<br><u>Oxychilus alliarius</u> (Miller, 1822)<br><u>Oxychilus helveticus</u> (Blum, 1881)<br><u>Zonitoides excavatus</u> (Alder, 1830)<br><u>Zonitoides nitidus</u> (Müller, 1774) |
| Milacidae     | <u>Milax gagates</u> (Draparnaud, 1801)<br><u>Milax sowerbyi</u> (Férussac, 1823)<br><u>Milax budapestensis</u> (Hazay, 1881)<br><u>Boettgerilla pallens</u> Simroth, 1912                                                                                                                                                                                                                                                                                                                                |
| Limacidae     | <u>Limax maximus</u> Linnaeus, 1758<br><u>Limax cinereoniger</u> Wolf, 1803<br><u>Limax flavus</u> Linnaeus, 1758<br><u>Limax pseudoflavus</u> Evans, 1978<br><u>Limax marginatus</u> Müller, 1774<br><u>Deroceras laeve</u> (Müller, 1774)<br><u>Deroceras reticulatum</u> (Müller, 1774)<br><u>Deroceras caruanae</u> (Pollonera, 1891)                                                                                                                                                                 |
| Euconulidae   | <u>Euconulus fulvus</u> (Müller, 1774)                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Ferussaciidae | <u>Cecilioides acicula</u> (Müller, 1774)                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Clausiliidae  | <u>Cochlodina laminata</u> (Montagu, 1803)<br><u>Clausilia bidentata</u> (Strom, 1765)<br><u>Balea perversa</u> (Linnaeus, 1758)                                                                                                                                                                                                                                                                                                                                                                          |
| Testacellidae | <u>Testacella maugei</u> Férussac, 1819<br><u>Testacella haliotideae</u> Draparnaud, 1801<br><u>Testacella scutulum</u> Sowerby, 1821                                                                                                                                                                                                                                                                                                                                                                     |

Helicidae

Candidula intersecta (Poiret, 1801)  
Candidula gigaxii (L. Pfeiffer, 1850)  
Cernuella virgata (da Costa, 1778)  
Helicella itala (Linnaeus, 1758)  
Cochlicella acuta (Müller, 1774)  
Ashfordia granulata (Alder, 1830)  
Zenobiella subrufescens (Miller, 1822)  
Trichia striolata (C. Pfeiffer, 1828)  
Trichia hispida (Linnaeus, 1758)  
Arianta arbustorum (Linnaeus, 1758)  
Helicigona lapidida (Linnaeus, 1758)  
Theba pisana (Müller, 1774)  
Cepaea nemoralis (Linnaeus, 1758)  
Cepaea hortensis (Müller, 1774)  
Helix aspersa Müller, 1774

Freshwater

FAMILY

SPECIES

Neritidae

Theodoxus fluviatilis (Linnaeus, 1758)

Valvatidae

Valvata cristata Müller, 1774  
Valvata piscinalis (Müller, 1774)

Hydrobiidae

Hydrobia ventrosa (Montagu, 1803)  
Hydrobia neglecta Muus, 1963  
Hydrobia ulvae (Pennant, 1777)  
Pseudamnicola confusa (Frauenfeld, 1863)  
Potamopyrgus jenkinsi (E.A. Smith, 1889)

Bithyniidae

Bithynia tentaculata (Linnaeus, 1758)  
Bithynia leachii (Sheppard, 1832)

Ellobiidae

Ovatella myosotis (Draparnaud, 1801)  
Leucophytia bidentata (Montagu, 1808)

Physidae

Aplexa hypnorum (Linnaeus, 1758)  
Physa fontinalis (Linnaeus, 1758)

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lymnaeidae       | <u>Lymnaea truncatula</u> (Müller, 1774)<br><u>Lymnaea glabra</u> (Müller, 1774)<br><u>Lymnaea palustris</u> (Müller, 1774)<br><u>Lymnaea stagnalis</u> (Linnaeus, 1758)<br><u>Lymnaea auricularia</u> (Linnaeus, 1758)<br><u>Lymnaea peregra</u> (Müller, 1774)<br><u>Myxas glutinosa</u> (Müller, 1774)                                                                                                                                                                                    |
| Planorbidae      | <u>Planorbis planorbis</u> (Linnaeus, 1758)<br><u>Planorbis carinatus</u> Müller, 1774<br><u>Anisus leucostoma</u> (Millet, 1813)<br><u>Anisus vortex</u> (Linnaeus, 1758)<br><u>Bathyomphalus contortus</u> (Linnaeus, 1758)<br><u>Gyraulus laevis</u> (Alder, 1838)<br><u>Gyraulus albus</u> (Müller, 1774)<br><u>Armiger crista</u> (Linnaeus, 1758)<br><u>Hippeutis complanatus</u> (Linnaeus, 1758)<br><u>Planorbarius corneus</u> (Linnaeus, 1758)                                     |
| Ancylidae        | <u>Ancylus fluviatilis</u> Müller, 1774                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Acroloxidae      | <u>Acroloxus lacustris</u> (Linnaeus, 1758)                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Margaritiferidae | <u>Margaritifera margaritifera</u> (Linnaeus, 1758)<br><u>Anodonta cygnea</u> (Linnaeus, 1758)<br><u>Anodonta anatina</u> (Linnaeus, 1758)                                                                                                                                                                                                                                                                                                                                                   |
| Sphaeriidae      | <u>Sphaerium corneum</u> (Linnaeus, 1758)<br><u>Sphaerium lacustre</u> (Müller, 1774)<br><u>Pisidium amnicum</u> (Müller, 1774)<br><u>Pisidium casertanum</u> (Poli, 1791)<br><u>Pisidium conventus</u> Clessin, 1877<br><u>Pisidium personatum</u> Malm, 1855<br><u>Pisidium obtusale</u> (Lamarck, 1818)<br><u>Pisidium milium</u> Held, 1836<br><u>Pisidium pseudosphaerium</u> Schlesch, 1947<br><u>Pisidium subtruncatum</u> Malm, 1855<br><u>Pisidium henslowanum</u> (Sheppard, 1823) |

Sphaeriidae

Pisidium lilljeborgii Clessin, 1886

Pisidium hibernicum Westerlund, 1894

Pisidium nitidum Jenyns, 1832

Pisidium pulchellum Jenyns, 1832

Pisidium moitessierianum Paladilhe, 1866

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Appendix

Annotated list of useful literature

- Cameron, R.A.D. & Kerney, M.P. (in press). A Field Guide to the Land Mollusca of North-West Europe. Collins, London. -  
This promises to be a most comprehensive and indispensable text.
- Cameron, R.A.D. & Redfern, M. (1976). British Land Snails. Keys and notes for the identification of species. Linnean Society of London. (Synopsis of the British Fauna No. 6 64 pp. 31 figs.) -  
Deals with all 87 species of land snails found in the British Isles and has excellent keys.
- Ellis, A.E. (1978). British Freshwater Bivalve Mollusca. Keys and notes for the identification of species. Linnean Society of London. (Synopsis of the British Fauna No 11 110 pp. 39 figs. 15 plates). New updated edition of Ellis' earlier 'standard' work with an added section on Pleistocene sub-fossils.
- Janus, H. (1965). The Young Specialist looks at Land and Freshwater Molluscs. Burke, London. 180 pp. 26 figs. 4 plates -  
An extremely good, cheap introductory text covering 163 species.
- Kerney, M.P. (1976). Atlas of the Non-Marine Mollusca of the British Isles. Institute of Terrestrial Ecology, Cambridge. -  
Distribution maps of all species of non-marine molluscs. Overlays are now available.

- Macan, T.T. (1960). A Key to the British Fresh-and Brackish-water Gastropods. Freshwater Biological Association. Scientific Publication No.13, 44 pp. 15 figs. - Contains descriptions, good illustrations and ecological notes.
- McMillan, N.F. (1968). British Shells. Wayside and Woodland Series. Warne, London. - Deals with the majority of land and freshwater molluscs found in Ireland - includes a systematic list, but nomenclature outdated.
- Quick, H.E. (1949). Slugs. Linnean Society of London. (Synopsis of the British Fauna No.8 29 pp. 26 figs.).
- Quick, H.E. (1961). British Slugs. Bull. Brit. Mus. (N.H.), 6(3), 1-226. 18 figs. 2 plates, 23 maps. - Standard work - covers anatomy, behaviour and physiology.
- Scharff, R.F. (1891). The Slugs of Ireland. Trans. Roy. Dub. Soc. IV, 1891. 513-558, 24 coloured figs. - Dated but contains notes on anatomy, habitat and food of all the species known from Ireland at that time.
- Stelfox, A.W. (1911). A List of the Land and Freshwater Molluscs of Ireland. Proc. R. Ir. Acad., 29 (B), 65-164. An annotated list giving detailed distribution data and containing a comprehensive bibliography compiled by R.J. Welch.
- Taylor, J.W. (1894 - 1921). Monograph of the Land and Freshwater Mollusca of the British Isles. 3 vols. + 3 plates, (unfinished). Taylor Bros., Leeds. - Out of print and costly but a most comprehensive text.

This list omits a number of important continental works which are cited in -

Kerrich, G.J., Hawksworth, D.L. & Sims, R.W. (eds.) (1978).

Key works to the fauna and flora of the British Isles and  
Northwestern Europe. Systematics Association/Academic Press,  
London. - see pp.111-112; 114-116.

#### Reference collections

The Ulster Museum, Botanic Gardens, Belfast, BT9 5AB. .

The National Museum of Ireland, Kildare Street, Dublin 2.

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## EPIFAUNA FROM SOME ULSTER MAMMALS

D.P. Sleeman

During a search for fleas on a wide variety of mammals in Northern Ireland between January 1977 and September 1978, some epifauna other than fleas were recovered which are listed below. A list of fleas found and a description of the methods used to obtain hosts has already been prepared, to be published elsewhere. Host species from which the following epifauna were recovered were as follows: Wood mouse (Apodemus sylvaticus L.) from Longworth traps, Badger (Meles meles L.) car victims, Pipistrelle bat (Pipistrellus pipistrellus Schreb.) found dead, Red squirrel (Sciurus vulgaris L.) recent car victims, and Domestic pig (Sus scrofa domestica L.). The localities and 10 km grid references where the hosts were found are also listed.

### Coleoptera : Silphidae

Leptinus testaceus Mull. 1♂ from a male wood mouse at Cromore, Co. Derry, C.83. This is a new county record. This beetle has previously been recorded as far north as County Down (Fairley, 1963) and County Tyrone (Fairley, 1965). Three individual mice (200 1 ♀) were captured in the immediate area and examined. The occurrence of this beetle on a male mouse is what would be expected from Fairley's (1963) results, which show that male mice were more heavily infested. The beetle is in my possession.

### Siphunculata : Haematopinidae

Haematopinus suis (L.) 62 specimens of this louse were recovered from domestic pigs on farms near Coleraine, Co. Derry, C.83. Four of these were removed from a three year old sow, one specimen from a year old sow and the remaining 57 specimens from a two year old boar. Denny (1842) recorded this louse from pigs which had just arrived in England from Ireland and noted that infestations were; 'confined almost entirely to lean animals'. O'Mahony (1944) recorded H. suis from Co. Kilkenny on pigs, with a note that the species was not plentiful. Local farmers interviewed during this study stated that these lice are very numerous on

on older pigs, particularly on boars. Further study of the numbers of H. suis on domestic pigs would be worthwhile, as heavily infested pigs may not make proper gains in weight (O'Kane, 1912). Some specimens of this louse have been retained by me.

#### Mallophaga : Trichodectidae

Trichodectes melis (Fab.). This louse was found in large numbers with over 50 specimens on each of 2 male and 1 female badger that was examined. They were most frequently encountered on the badger's chest and forelimbs.

The males were found near Grange Courner, Co. Antrim, J.90 and Cromore, Co. Derry, C.83, and the female was found near Knowe Head, Co. Derry, C.83. This species of louse has previously been recorded in the latter county by Hunter (1934) and in Co. Donegal by O'Mahony (1946). Some specimens of this louse have been retained by me.

#### Acarina : Mesostigmata

##### Ixodidae

Ixodes ricinus (L.) 3 nymphs and 6 larvae from a male red squirrel near Newcastle, Co. Down, J.33. This squirrel was also infested with 109 squirrel fleas Monopsyllus sciurorum sciurorum (Schr.). Larvae of I. ricinus have previously been found on a red squirrel in Ireland by N.C. Rothschild (G.A. Walton, unpublished data). Arthur (1963) names the red squirrel as a British host of I. ricinus. I. ricinus is the vector of louping ill virus in Ireland (Walton, 1965), thus the ecology and distribution of this tick is of some importance. Walton and O'Donnell (1967) reported that I. ricinus had not yet been recorded from several counties, including Co. Down.

##### Argasidae

Argas vespertilionis (Latreille) 2 larvae from a male pipistrelle bat in Belfast, Co. Down J.37. The bat was apparently suffering from

starvation. The larvae were recovered near the bat's legs, unlike any of those recorded by O'Gorman (1965) which were found on the head, abdomen and chest. This tick has been recovered from four species of Irish bats (G.A. Walton, unpublished data). All tick specimens recorded in this study are in the national tick collection at present in the care of the Zoology Department, University College Cork.

#### Acknowledgments

I would like to thank Mr. C.H.C. Lyal of the British Museum (Natural History) and Mr. M. Waterhouse for confirming my identification of lice and beetle respectively. I am very grateful to Dr. G.A. Walton for his help with identification of ticks, and for allowing me access to the tick collection at University College Cork.

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RECORDS OF THE IRISH FLORA PUBLISHED BEFORE 1726

E. Charles Nelson

Introduction

Caleb Threlkeld (1676-1728) published the first book to give a concise account of Irish plants, Synopsis Stirpium Hibernicarum, in Dublin on the 26th October 1726 (Nelson, 1978). The work listed over 500 taxa, ranging from flowering plants to marine algae, which had been observed in Ireland, and included some cultivated species such as the potato (Solanum tuberosum L.). The book provoked an immediate accusation of plagiarism from Jacob Dillenius, who wrote that Threlkeld "in his whole Catalogue hath but one plant which hath not been known to grow....." in Ireland (Britten, 1924, Nelson, in press).

In an attempt to assess the state of knowledge of Irish plants prior to 1726, so that this accusation could be critically examined, a survey was made of the major floristic texts published in the British Isles before 1726, and of papers published in learned journals; from these all records of Irish plants were extracted. It is likely that Threlkeld had access to many of these works; indeed, he cited several in his Synopsis (Threlkeld, 1726, pp.23-26).

In a study of the sources used by Threlkeld, Mitchell (1974) concluded that "on careful study it becomes clear that Threlkeld's unacknowledged 'tracing' from the writing of John Ray was carried out on quite a lavish scale". However, the examples of 'tracings' from Ray's works quoted by Mitchell (1974) mainly concern textual matters; for example, when giving details of a plant's medicinal properties Threlkeld used passages from Ray's books, though often translated into English. Such use of previously published authoritative statements of medicinal or other material can hardly be regarded as plagiarism, nor reprehensible - modern scientists rely heavily on the writings of earlier workers and use their predecessors material with impunity. In any case, Threlkeld included in his Synopsis a bibliography or "Names of the Authors made use of in this Essay, and sometimes quoted" (p.23). As pointed out

elsewhere (Nelson, loc.cit.) this list of works must have been considered sufficient by Threlkeld who possibly was unable to include references, in a modern sense, after each borrowed statement.

Threlkeld collected plants around Dublin (see Synopsis, p.21, Colgan, 1904, Nelson, in press). He had access to unpublished manuscripts, including one which he attributed to Richard Heaton (see Nelson, loc.cit.) that contained lists of Irish vernacular names (Threlkeld 1726, Mitchell 1974, Walsh 1978). Hogan et.al. (1910) estimated that Threlkeld's Synopsis contained 407 Irish plant names, including in many cases, several dialect names for individual species (Mitchell, 1974). If Threlkeld used all the information in the 'Heaton Manuscript' he might have obtained about 270 species records (that is the number of separate "species" in Synopsis which have Irish names) - some of the Irish names came from other sources (see Mitchell, 1974). As there are about 500 plants listed, this leaves a short-fall of 230 taxa. Colgan (1904) noted that the Synopsis contained 119 plants specifically recorded from the Dublin region (41 have Irish names), all of which Threlkeld could have collected himself. Other records (those incorporated in the Appendix to the Synopsis) were contributed by Thomas Molyneux, though Molyneux did not write the appendix, but some of these came from published sources.

At least one other manuscript list of native Irish plants is recorded for this period; the physicians Vaughan, Mitchell, and Wood made a catalogue of Wexford plants in 1696 (Mitchell, 1975) but there is no evidence that Threlkeld had access to this. This list is not extant.

For his plant records Threlkeld had four sources - the 'Heaton Manuscript', Molyneux's notes (which only became available after the Synopsis went to press), his personal notes and herbarium (hortus siccus), and previously published works. Of these, Dillenius had access to the published works along. Molyneux's notes included records from William Sherard who was a friend of Molyneux and John Ray (Dillenius was the editor of the third edition of Ray's Synopsis Methodica Stirpium Britannicarum). Sherard resided in Ireland from 1690 to 1694, and in

1693 visited Dublin, during which time he annotated an Hortus siccus owned by Molyneux (now in the National Botanic Gardens, Glasnevin). Sherard collected herbarium specimens in Ireland which he sent to England; some of these arrived in time to be incorporated in Plukenet's Phytographia (1662) (see catalogue nos. 39, 46, 47). It is possible that Sherard sent a more extensive list of Irish plants to Ray or Plukenet, and that such a list was later available to Dillenius, but there is no evidence for such a thesis.

The published material includes only seventy-five references to Irish plants. Thus, Dillenius and Threlkeld could have obtained very few definitive Irish records from published sources. In this light, is it prudent to accuse him of plagiarism, especially when he did acknowledge all the sources he used, whether manuscripts or books, at least once in his Synopsis?

Dillenius' accusation against Threlkeld's flora was provoked, undoubtedly, by the latter's comments about Dillenius' nomenclatural opinions, which Threlkeld said "savoured more of the Fop, than the Philosopher; for such vapoury Men, darken by words without knowledge. I could heartily wish these conceited Men had given no occasion to make the necessary reflection, whom I value as much for their skill in Botany, as do undervalue them, for their blunders in Nick-Names....." (Threlkeld, 1726, see under '*Lichenoides saxatile tinctorium folijs pilosis purpureis*').

### The Catalogue

In the appended list, the pre-1726 published records are noted; the localities are given in modern form and the current scientific names are used. The pre-Linnaean polynomials, if used in the original source, and the relevant portion of text giving details of collection and/or habitat are quoted. It is sometimes difficult to co-relate the pre-Linnaean names with modern species names; in the preparation of the catalogue various works were used to assist in interpreting the



polynomials (e.g. Druce 1928, Druce & Vines 1907, Smith 1978, Stearn 1973, Stewart & Corry 1938, Vines & Druce 1914). When there is an extant herbarium specimen, this is noted and the present locations of the specimens given in the standard form (see Index Herbariorum I, ed. 6). Only taxa which are explicitly stated to have been observed or collected in Ireland are included; the passage quoted should be the earliest tracable reference to the plant's presence in this country. In some cases it is possible by extrapolation to deduce that a species listed in an early work, but without any reference to Ireland, was collected here; none of these records is included as they do not constitute the first Irish record in the strictest sense (e.g. 'Usnea seu Muscus cranio humano innatus' is listed in the first edition of Ray's Synopsis (p.244) without any reference to Ireland, and similarly in the third edition. Threlkeld notes it is 'Muscus innatus cranio humano' - the first Irish record therefore dates from 1726).

In the catalogue the sources have been cited in an abbreviated form; author, abbreviated title, volume number, page number, and date of publication are given. The sources are given in full in the bibliography.

While every effort has been made to check that these are the earliest published records, it is recognised that other sources may be found which predate those given. In some cases, unpublished (at that time) manuscripts provide additional information about a record; relevant material is quoted here.

As well as these records from published works, a substantial number of plant records may be gleaned from manuscripts (including letters) which were not published in 1726, but have since been published. These data will be listed in a subsequent paper.

#### Catalogue

Plants are arranged alphabetically within the usual classes and sub-divisions of the plant kingdom, using the current scientific names (in Scannell & Synnott, 1972).

An asterisk before the species name indicates that the plant is introduced.



DICOTYLEDONES

Alchemilla alpina L.

Kerry (probably Brandon Mt.), c. July 1700, E. Lhwyd.

"Alchimilla Alpina pentaphyllos... On the mountains of Keri".

Lhwyd, Phil. Trans., 27; 526 (1712).

Arbutus unedo L.

West of Ireland (probably Kerry), ante 1640, possibly R. Heaton.

"In Ireland... (plants) have been found growing of their owne accord... and hath been of late dayes found in the West part of Ireland, of a reasonable bigge size for a tree but with smaller fruite... it hath come to us from Ireland by the name of Cane Apple..." Parkinson, Theatrum Botanicum, pp.1489-90 (1640)

Kerry, ante 1696, T. Molyneux.

"Arbutus sive Unedo... in the Rocky Parts of the County of Kerry about Loughlane, and in the Islands of the same Lough... it flourishes naturally... as to become a large tall Tree".

Molyneux, Phil. Trans., 19; 510 (1696).

Arctostaphylos uva-ursi (L.) Spreng.

Antrim (Lough Larne), Donegal (Sl. Snacht), January-March 1700; Clare, c. July 1700, E. Lhwyd.

"Dr. Merret's Vaccinia rubra foliis Myrtinis crispis (a very beautiful plant) we found to be no rarity in this Kingdom".

Lhwyd, Phil. Trans., 27; 526(1712).

"In ye County of Antrim about Lough Larn we found plenty of a very rare plant... Vaccinia rubra foliis myrtinis crispis... We afterwards found it plentifully above a fresh loch within 3 miles of Castle Do in ye County of Donnegall, as also on Sliav Snacht in ye same County..." Lhwyd mss. (see Mitchell 1975, Campbell 1960)

"Lusradh na geire bornigh bear whortle berries, viz. Radix Idaea putata, sive uva ursi... I observ'd this plant to be so called in the County of Clare". Lhwyd, Arch.Brit., p.431(1707) (see Campbell 1960; Nelson, in press).

Bidens cernua L. var. radiata Sond.

Ireland, c.1690-1694, W. Sherard.

"Verbesina pulchriore flora luteo... In Hibernia certe frequentissime occurrit, D. Sherard". Dillenius, Ray's Synopsis III, pp.187-188 (1724).

Daboecia cantabrica (Huds.) C. Koch.

Mayo & Galway (Iar Connaught), c. June 1700, E. Lhwyd.

"In montibus Mayo squalido & spongioso solo frequens est, et & per totum Hiar-Connacht in Gallovidia". Ray, Historia Plantarum, III, p.98 (1704).

"In most of the Mountains of Galloway and Mayo grows an elegant sort of Heath, bearing large Thyme-leaves, a spike of fair purple Flowers like some Campanula, and viscous stalks. I know not whether it be any thing related to the Cisti Ladaniferae".

Lhwyd, Phil. Trans., 27; 525(1712).

Specimens: BM-SL "Erica S. Dabeoci Hibernis D. Lhwyd".

Drosera anglica Huds.

Ireland, ante 1640, R. Heaton.

"Ros solis sylvestris longifolius... This was sent me by Mr. Zanchie Silliard, an Apothecarie of Dublin in Ireland". Parkinson, Theatrum Botanicum, p.1053 (1640).

"I have some of this plant to Zanchie Sylliard, Apoth. of Dublin, which he sent to Mr. Parkinson, who in his description mentions the saide Zanchie as if he had found it. Mr. Heaton".

How, Phytologia, p.105 (1650).

Drosera sp.

Mayo & Galway, c. June 1700, E. Lhwyd.

"In the same Places (the Mountains of Galloway & Mayo)... a sort of Ros Solis, which I take to be undescribed". Lhwyd, Phil. Trans., 27; 526 (1712).

Dryas octopetala L.

Clare & Galway (the Burren), c. 1640, R. Heaton.

"Teucrium alpinum cisti flore... In the mountains betwixt Gort and Galloway. It makes a pretty shew in the winter with his rough heads like Virona. Mr. Heaton". How, Phytologia, p.120 (1650)

Sligo (Benbulbin), c. May 1700, E. Lhwyd.

"Mr. Heaton's Chamaedrys Alpina is a common plant of those Hills the Mountains of Ben Bulbin and Ben Buishgen , as also on divers other Mountains and Heathy Grounds in Connacht and Munster". Lhwyd, Phil. Trans., 27; 525 (1712).

"Caryophyllata Alpina Chamaedryos folio... Found by Mr. Heaton in Ireland on the Mountains between Gort and Galloway. (Hujus plantae speciminibus me ditavit D. Lhwyd, in montibus Hibernicis juxta Sligo collectis...)". Dillenius, Ray's Synopsis III, p.253(1724).

Specimen: BM-SL "A D. Lhwyd collect. prope Sligo in Hybernica".

Euphorbia hyberna L.

Ireland, ante 1640, possibly R. Heaton.

"Tithymalus Hibernicus" (named only, possibly communicated by R. Heaton). How, Phytologia, p.121 (1650).

"Makinboy... in Hibernia". Ray, Synopsis II, p.183 (1696).

Gentiana verna L.

Clare & Galway (the Burren), ante 1640, R. Heaton.

"Gentianella alpina verna... In the mountaines betwixt Gort and Galloway abundantly. Mr. Heaton". How, Phytologia, p.46 (1650)

Lobelia dortmanna L.

Antrim (Lough Neagh near Kilmore, Moira) c. 1690-1694, W. Sherard.

"Gladolus lacustris... in lacu Hibernico Lough Neagh, ua territorium oppidi Kilmore alluit prope Moyra; Dr. Sherard". Dillenius, Ray's Synopsis III, p.307 (see Subularia erecta...)(1724).

Lycopus europaeus L.

Ireland, c. 1690 - 1694, W. Sherard.

"Lycopus palustris... Hirsutum in Hibernia saepius observavit.  
D. Sherard." Dillénus, Ray's Synopsis III, p.236 (1724).

Pinguicula lusitanica L.

Mayo & Galway (Iar-Connaught), c. June 1700, E. Lhwyd.

"In the same places (the Mountains of Galloway & Mayo) Pinguicula flore carneo minore is a common plant..." Lhwyd, Phil. Trans., 27; 526 (1712).

"Together with it (Daboecia cantabrica) grows Mr. Ray's Pinguicula flore carneo minore very common...." Lhwyd mss. (see Mitchell 1975).

Potentilla fruticosa L.

Galway (Lough Corrib), c. June 1700, E. Lhwyd.

"Pentaphylloides fruticosa we found plentifully amongst Limestone rocks on the Banks of Loch Crib in the County of Galloway". Lhwyd, Phil. Trans., 27; 526 (1712).

Potentilla palustris L.

Ireland, c. 1690, G. Bonnivert.

"Pentaphyllum palustre rubrum crassis & villosis foliis Suecicum & Hibernicum hujus exemplar ex Suevia sibi allatum nobis dedit Reverend. D Stonestreet quod etiam Ornatissimus Vir D Gideon Bonnavent ex Hibernia (qua invenit) rediens, nobis amicissime communicavit". Plukenet, Phytographis pt. 3, t.212, f.2 (1692).

Specimen: BM-SL.

Ireland, c. 1690 - 1694, W. Sherard.

"'Tis common in all the Bogs of Ireland, Dr. Sherard". Ray's Synopsis II, p.141 (1696).

Pyrola rotundifolia L.

Laois (Roscrea), ante 1640, R. Heaton.

"Pyrola vulgaris... It growes... in a bogge by Roscre in the King's County. Mr. Heaton" How, Phytologia, p.100 (1650).

Ranunculus flammula L.

Ireland, c. 1690, G. Bonnivert.

"Ranunculus flammeus latiori Plantaginis folio, marginibus pilosis, ex Hibernia ab Ornatissimo viro D. Gideon Bonaverit accepimus". Plunkenet, Almagestum, p.312 (1696).

Specimen: BM-SL

Rubus saxatilis L.

Offaly (Edenderry), ante 1640, R. Heaton.

"Soon-a-man-meene: In English the juyce of a faire woman. In a wood near Eddenderry. I referred it to Rubus saxatilis but the berries of this plant were yellow. Mr. Heaton" How, Phytologia, p.116 (1650).

Saussurea alpina (L.) DC.

Kerry, c. July 1700, E. Lhwyd.

"On the Mountains of Keri... Cirsium humile montanum Cynoglossi folio polyanthemum R. Syn..." Lhwyd, Phil. Trans., 27: 526 (1722).

Saxifraga hirsuta L.

Kerry, c. July 1700, E. Lhwyd.

"On the Mountains of Keri... Sanicula aizoides inter guttatam & Sedum serratum ambigens..." Lhwyd, Phil. Trans., 27: 526 (1712).

Saxifraga spathularis Brot.

Kerry (Mangerton), ante 1696,,T. Molyneux..

"Cotyledon sive Sedum serratum Latifolium Montanum guttato flore.. grows plentifully here with us in Ireland, on a Mountain call'd the Mangerton in Kerry, Six or Seven Miles over... Two Miles from the Town of Killarny... Here it spreads it self so abundantly, as to cover great part of the Mountain..." Molyneux, Phil. Trans., 19; 510-511 (1696).

Kerry, c. July 1700, E. Lhwyd.

"On the Mountains of Keri, Sanicula guttata grows in abundance..." Lhwyd, Phil. Trans., 27; 526 (1712).

Specimen: BM-SL: "A D. Lhwyd in Hybernia collect".

"It grows plentifully in Ireland on a Mountain called the Mangerton in Kerry... as Dr. Molyneux observes... Ex montibus etiam Sligo\* Hiberniae attulit D. Lhwyd" Dillenius, Ray's Synopsis III, p. 355 (1724).

Saxifraga stellaris L.

Kerry, c. July 1700, E. Lhwyd

"On the Mountains of Keri... Cotyledon hirsuta..." Lhwyd, Phil. Trans., 27; 526 (1712).

Saxifraga sp.

Mayo, Galway and Kerry, 1700, E. Lhwyd.

"Sedum serratum foliis pediculis oblongis infidentibus is exceeding common on all the Mountainous Tracts of Mayo, Galloway, and Keri". Lhwyd, Phil. Trans., 27; 526 (1712).

Senecio jacobaea L. var. flosculosus Gray.

Meath or Lough (Drogheda), c. 1693, W. Sherard.

"Jacobaea vulgaris Flore nudo copiosissime nascens in sabulosis prope littus, tribus vel quatuor milliaribus a Drogheda, adeo ut e mille plantis vix unum flore radiato reperiens. D. Sherard." Ray's Synopsis II, p.82 (1696).

Specimen: OXF - herb. Morrison "Jacobaea apetalos Sherardi, ex. Hibernia, D. Sher."

Silene vulgaris subsp. maritima (With.) A. & D. Löve

Aran Is., c. May 1700, E. Lhwyd.

(It is possible that this is the species described by Lhwyd as "A sort of matted Campion with a white Flower, which I bewail the Loss of; for an imperfect Sprig of it was only brought me..." Lhwyd, Phil. Trans., 27; 525 (1712).

Solanum tuberosum L.

Ireland (cultivated).

"In Irlandia colitur". Dillenius, Ray's Synopsis III, p.265 (1724)

\* an error, S. spathularis is not recorded in Sligo (Scannell & Synnott, 1972)

Solidago virgaurea L.

Ireland, c. 1690 - 1695, W. Sherard.

"Virga aurea vulgari humilior. Virga aurea humilis, a vulgari distincta in Hibernia collecta". Ray's Synopsis II, App., p. 341 (1696).

Spergula cf. pentandra L.

Ireland, c. 1690 - 1694. W. Sherard\*.

"Spergula annua semine foliaceo nigra, circulo membranaceo albo cincto... In Hibernia locis arenosis observavit Dr. G. Sherard". Dillenius Ray's Synopsis III, 351 (1724)

Specimen: OXF - herb. Morison".

Subularia aquatica L.

Down (Lough Neagh near Kilmore), c. 1690 - 1694, W. Sherard.

"Graminifolia aquatica Thlaspeios capitulis, rotundis, septo medio, siliculam divimente, a D. Sherard Inventore, ex Hibernia, in Angliam, nuperrime nobis transmissa est". Phytographia, pt.3, tab. 188 (1692).

"...sub aquis nascitus sabuloso solo inte Gladiolus lacustrem... in lacu Hibernico Lough Neagh, qua territorum oppidi Kilmore alluit prope Moyra. Dr. Sherard". Dillenius, Ray's Synopsis III, p.307 (1724).

Specimen: OXF - herb. Morison, "Gramen junceum Hibernicum minus Thlaspios capitulis, Sherardi".

Thymus drucei Ronn.

Ireland, c. 1690, G. Bonnivert.

"Serpyllum hirsutum minus repens inodorum ex Hibernia a D. Bonavert accepit". Plunkenet, Almagestum, p.344 (1696)

Specimen: BM-SL: "ex Hibernia".

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\* a controversial specimen (see Druce 1890a, 1890b, Britten 1890). It could have been an adventive weed imported from Europe in flax seed.

Trifolium pratense L.

Ireland.

"Trifolium pratense... Three leaved grasse or Meadow Trefoil... which are called in Irish Shamrockes". Gerard, Herball, p.1017 (1596).

Trifolium repens L.

Ireland.

"Trifolium pratense flore albo... in Irish Shamrockes". Gerard, Herball, p.1017 (1596).

Tussilago farfara L.

Ireland, c. 1690 - 1694, W. Sherard.

"Lanuginem pronae foliorum superficiei adnascentem abradunt Hiberni, et affervant pro somite ad ignem concipiendum. D. Sherard". Ray's Synopsis II, p.78 (1696).

Vicia sylvatica L.

Down (Rostrevor), c. 1690 -1694, W. Sherard. (see Stewart & Corry 1938).

"Orobus sylvatica nostras... Dr. Sherard near Ross-trevor in Ireland". Ray's Synopsis II, p.191 (1696).

MONOCOTYLEDONES

Agrostis stolonifera L.

Down (Mourne Mts.,) c. 1690 - 1694, W. Sherard.

"Gramen montanum miliaceum minus, radice repente... Upon the Mountains of Mourn in Ireland; Dr. Sherard". Dillenius, Ray's Synopsis III, p.402 (1724).

Specimen: OXF - herb. Morison "Gramen miliaceum parvum repens Hibernicarum".



Carex dioica L.

Down, c. 1690 - 1694, W. Sherard.

"Gramen cyperoides minus Ranunculi capitulo longiore,  
D. Sherard... in palustribus spongiosis Bogs dictis in  
Comitatu Down Hiberniae". Ray's Synopsis II, p.270 (1696).

Specimen: OXF - herb. Morison "Gramen cyperoides parvum  
Ranunculi capitulo longiore, D. Sherard. In ye county  
of Down on Mount. Bogs, Dr. Sherard".

Cephalanthera longifolia (L.) Fritsch.

Down (Creevytenant, near Ballynahinch), c. 1690 - 1694, W. Sherard.

"Helleborine foliis praelongis angustis acutis... Hoc anno 1694.  
Helleborines quandam speciem nobis communicavit D. Sherard,  
titulo Helleborines palustris angustifoliae flore albo; quam  
eandem esse existimat cum Helleborine fol. prael. acut. angustis  
Newtoni, quocum et nos sentimus..." Found on a rotten bog by a  
Lough-side near the Dairy (Derry) House at Crevetanau Ballina-  
hinch, Ireland". Ray's Synopsis II, p.242 (1696).

Specimen: OXF - herb. Morison "Helleborine flore albo. This is the  
same plant Mr. Nuton (sic.) mistook and called Helleborine  
foliis praelongis angustissimis R.S.M.". (Sherard's  
specimen on second sheet).

Epipactis atrotubens (Hoffm.) Schultes

Laois (Lysnageragh), ante 1650, R. Heaton.

"Helleborine atro rubente Park. Wild White Hellebore with dark  
red flowers: found by Lysnageragh, Mr. Heaton". How,  
Phytologia, p.51 (1650).

Scilla verna Huds.

Dublin (Ringsend), ante 1650, R. Heaton.

"Hyacinthus stellarius vernus pumilus. The small spring starred  
Hyacinth. At the Ring's End neere Dublin. Mr. Heaton". How,  
Phytologia, p.60 (1650).

GYMNOSPERMAE

Abies alba Mill.\*

Kerry, ante 1696, "a person of good integrity".

"Abies foemins... in the county of Kerry", Ray's Synopsis II,  
(Post Librum Impressus), s.n.

Juniperus communis L.

Clare, c. July 1700, E. Lhwyd.

"Iur Creige Juniper. In the County of Clare I observ'd them to  
pronounce it uar cregi". Lhwyd, Arch. Brit., 431.

Kerry (Lough Leane), ante 1724, "an apothecary".

"Juniperus sabins. It grows in one of the islands in Lough  
Lane in the county of Kerry, as Dr. Molyneux was informed by  
an apothecary". Dillenius, Ray's Synopsis III, p.44 (1724).

Juniperus communis L. var. nana (Willd.) Syme.

Clare (Kilmadough), ante 1650, R. Heaton.

"Juniperus repens. Creeping juniper. Upon the Rocks near  
Kilmadough Mr. Heaton". How, Phytologia, 64 (1650).

Picea abies (L.) Karst.\*

Kerry, ante 1696, "a person of good integrity".

"Abies mas Theophrasti... in the county of Kerry". Ray's  
Synopsis II, (Post Librum Impressus), s.n.

Pinus sylvestris L.

Kerry, ante 1696, T. Harrison.

"...Found also by Mr. Harrison in Ireland, who relates that  
the two foregoing plants <sup>w</sup>ere found in the county of Kerry  
(where the Arbutus grows) by a Person of good Integrity and  
Skill in the Knowledge of Plants". Ray's Synopsis II,  
(Post Librum Impressus), s.n.

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<sup>w</sup> Abies alba and Picea abies (see 40 and 43, supra)

PTERIDOPHYTA

Adiantum capillus-veneris L.

Aran Islands, c. June 1700, E. Lhwyd.

"in the Isle of Aran (near Galloway) we found great plenty of  
Adiantum verum...". Lhwyd, Phil. Trans., 27: 525 (1712).

Asplenium adiantum-nigrum L.

Down (Mourne Mts.), c. 1690, W. Sherard.

(This species is illustrated by Plukenet, Phytographia, tab.282, f.3 (1692) under "Filix Americana non ramosa tenerior, pinnulis vere capillaceis & Filicis genus ex Insula Jamaicensi molliusculum foliis tenuissime pennatis...a D. Sherard habuimus". However, in Mantissa, p.78 (1700) Plukenet corrected this as follows: "...ad.lin.41 Post Filix; deleanur Americana, & ad.lin.42. Insula Jamaicensi, & eorum loco; pone ex Hibernia, Et post Tab. add. 282 fig.3. nondum edit").

"Filix minos longifolia, tarsis raris, pinnulis longis tenuissimis & oblongis laciniis fimbriatis, D. Sherard. On the Mountains of Mourn in the County of Down in Ireland..."  
Ray's Synopsis II, p.51 (1696).

Specimen: OXF - herb. Morison; "Ex Hibernia, Filis minos non ramos. fol. capilacea tenuitate divisis, was gathered from the mountains of Mourne in ye Co. of Down, D. Sher."

The specimens in the Sloane and Sherard herbaria are similar to A. adiantum-nigrum f. kalothrix (see Stewart & Corry 1938).

CHAROPHYTA

Chara hispida L. var. hispida f. polyacantha (A.Br.) R.D. Wood.

Ireland (possibly Down), c.1690, W. Sherard.

"Hippuris muscosus sub aqua repens in Hibernis, ubi insignis Botanicus, D. Sherard invenit..." Plukenet, Phytographia, tab. 193, f.6. (1692).

(for comments on this record see Groves & Bullock-Webster 1924 (under C. aculeolata Kutzing) and Wood 1965).

Chara hispida (contd.)

"Equisetum muscorum sub aquis repens, semine Lithospermi.

D. Sherard...in the Turf-bogs in Ireland". Dillenius,

Ray's Synopsis III, 132-133 (1724).

BRYOPHYTES

Aulacomnium palustre (Hedw.) Schwaegr.

Ireland, c. 1690 - 1694, W. Sherard.

"Muscus trichoides major palustre citrini coloris... Hanc speciem rarum & elegantem primus mihi suppeditant. D. Sherard LL.D. ex Hibernia". Ray's Synopsis II, App., p.338 (1696):

Specimen: OXF-herb. Morison; "Muscus palustris flagellis erectis luteolis, ex Hybernia D. Sherard attulit".

Bryum pseudotriquetrum (Hedw.) Schwaegr. var. bimum (Brid.) Lilj.

Ireland, c. 1690 - 1694, W. Sherard.

"Muscus trichoides palustris, capitulis erectis, foliis reflexis...

Dr. Sherard in Hibernia..." Ray's Synopsis II, App., p.338 (1696).

Drepanocladus aduncus (Hedw.) Warnst.

Ireland, c. 1690 - 1696, W. Sherard.

"Muscus fluitans foliis & flagellis longis tenuiusque...

Dr. Sherard found it in the Pits of the shaking Bogs in Ireland"

Ray's Synopsis II, App., p.338 (1696).

Neckera crispa (Hedw.)

Ireland, c. 1690, G. Bonnivert.

"Muscus terrestris major ramulis compressis, filiis supersicie crispis. Eundem D. Bonavert ex Hibernia ad me misit". Ray's

Synopsis II, App., p.337 (1696).

Specimen: OXF-herb. Morison; "Ex Hibernis attulit D. Sherard".

Plagiothecium undulatum (Hedw.) Br.Eur.

Ireland, c. 1690 - 1694, W. Sherard.

"Muscus terrestris repens, Lycopodii ferme facie. I first received it from Dr. Sherard, who found it in Ireland..."

Ray's Synopsis II, App., p.337 (1696).

Specimen: OXF-herb. Morison.

Rhytidiadelphus loreus (Hedw.) Warnst.

Down (Creevytenant, near Ballinahinch), c.1690 - 1694, W. Sherard.

"Muscus erectus major foliis angustioribus acutis. D. Sherardo frequenter abvius fuit in Hibernia". Ray's Synopsis II, App.p.337(1696).

Specimen: OXF-herb. Morison; "A.D. Sher. in Hybernica collect".

"Hypnum repens surculis magis erectis, foliis reflexis longioribus cinctis... On the Mountains in Crevetenan Ballina-hinch in the County of Down, Ireland" Dillenius, Ray's Synopsis III, p.82 (1724)

Schistidium apocarpum (Hedw.) Br.Eur.

Ireland, c. 1690 - 1694, W. Sherard.

"Polytrichum capulis subrotundis pediculis brevissimis infidentibus calyptra striata, arboreum ramosum majus... In Hibernis, D. Sherard". Ray's Hist. Plantarum, III, p.40 (1696).

Tortula ruralis (Hedw.) Gaertn.

Ireland, c. 1690 - 1694, W. Sherard.

"Polytrichum capulis oblongata-rotundis calyptris pilosissimis. Muscus capitulis longis acutis pilosissimis... Observ'd in Ireland by Dr. Sherard". Ray's Synopsis II, p.33 (1696).

(sp. ined.)

Ireland, (c. 1690 - 1694, W. Sherard).

"Muscus trichoides pediculo contorto D. Sherard...aquae tamen infusis retroquetur ad modum aristarum avenae sylvestris. Ex Hibernia" Ray's Synopsis II, App., p.339 (1696).

"Bryum trichoides capitulis erectis, pediculis intortis tenuibus virentibus...In Hibernia". Dillenius, Ray's Synopsis III, p.97(1724).

## LICHENS

Lobaria laetevirens (Lightf.) Zahlbr.

Ireland, c. 1690 - 1694, W. Sherard.

"Muscus arboreum, licheniformis, scutellatus, ex cinerea viridis.

On Ash-trees in Ireland, Dr. Sherard". Ray's Synopsis II, p.23(1696).

Specimen: OXF-herb. Morison; "Muscus Lichenoides arborum Hybernicus...  
D.D. Sherard ex Hybernia".

(Sp. ined.)

Ireland, c. 1690 - 1694, W. Sherard.

"Muscus licheniformis, viridis crispus. Dum in arboribus serpit,  
folia seu segmenta erigit numerosa, carnosa, divisa, crispa, simul  
conferta. D. Sherard LL.D. in Hibernia invenit". Ray's Synopsis  
II, App., p.331 (1696).

(Sp. ined.)

Ireland, c. 1690 - 1694, W. Sherard.

"Lichen terrestris supinus minimus dichotomus oblongis segmentis  
inter muscus reptans, in Hibernia a D. Sherard observatus".  
Ray's Synopsis II, p. 23 (1696).

## FUNGI

Dacrymyces deliquescens (Bull.) Dby.

Ireland, c. 1690 - 1694, W. Sherard.

"Agaricus membranaceus sinosis, substantia gelatinae... Fungus  
membranaceus parvus aureus... On rotten wood... in Ireland.  
Observed by Dr. Sherard... Dillenius, Ray's Synopsis III, p.21-22(1724)

Lycoperdon saccatum Vahl.

Down (Warringstown), c. 1690 - 1694, W. Sherard.

"Fungus pulveri, Crepilupi dictus, pediculo longiori scabro...Found  
under Pine-trees in Warringstown, in the County of Down, Ireland.  
Recens vestibus adhaerescit". Ray's Synopsis II, p.16 (1696).

Specimen: OXF-herb. Morison; "D. Sher. ex Hibernia".

Lycoperdon sp.

Down (Moyra), c. 1690 - 1694, W. Sherard.

"Fungus pulverulentus, Crepitus lupi dictus, major, pedicula longiore ventricosus D. Sherard... In several places in the North of Ireland: as in Sir Arthur Rawdon's Orchard, in the County of Down at Moyra". Ray's Synopsis II, p.16 (1696).

Panus stipticus (Bull.) Fr.

Ireland, c. 1690 - 1694, W. Sherard.

"Agaricus parvus lamellatus, pectunculi forma elegans...Fungus parvus lamellatus pedunculi forma. Alno adnascens... Common in woods in Ireland. D. Sherard." Ray's Synopsis II, p.14 (1696)

Specimen: OXF-herb. Morison; "Fungus alno adnascens pectunculi forma, D. Sher. ex Hibern".

Scutellinia scutellata (L. ex St. Amans) Lambotte.

Down (near Hillsborough), c. 1690 - 1694, W. Sherard.

"Pezizo acetabuliformis coccinea...Fungus arboreus acetabuli more cavus, coccineus marginibus pilosis D. Sherard...I found it in June on rotten Oaks in Kilwarlin near Hillsborough in Ireland. This is not above half an inch over, all scarlet with black stiff hairs on the brwim". Ray's Synopsis II, p.19 (1696).

(Sp. ined.)

Ireland, c. 1690 - 1694, W. Sherard.

"Fungus semiorbicularis niger...In...Ireland D. Sherard".  
Ray's Synopsis II, p.19 (1696).

(Sp. ined.)

"Fungus Lupi crepitus dictus in summitate pulverulentus..."  
Dillenius, Ray's Synopsis III, p.26 (1724).

(Sp. ined.)

Ireland, c. 1690, G. Bonnivert.

"Fungus niger compressus varie divaricatum & implexus inter lignum & corticem... D. Bonavert cui inter arma vacat adesse rebus naturalibus ex Hibernica attulit. Fungum praedicto sere similem..."  
Ray's Synopsis II, App., 334 (1696).

(Sp. ined.)

Ireland, c. 1690 - 1694, W. Sherard.

"Fungus coriaceus Quercinus haematodes...Hibernis Oak-leather dictus in fisuris in Hibernia Quercuum putridarum reperitur... D. Sherard". Ray's Synopsis II, p.19 (1696).

(Sp. ined.)

Ireland, c. 1690 - 1694, W. Sherard.

"Fungus membranaceus seu coriaceus, acetabuli modo concavus, colore intus coccineo sue cremesino saturo...Very common on rotten sticks...In Ireland...Variat colore purpureo"  
Ray's Synopsis II, p.19 (1696).

(Sp. ined.)

Ireland, c. 1690 - 1694, W. Sherard.

"Fungus perniciosi...membranaceus parvus aureus... On rotten wood ...Ireland. Both these last observed by Dr. Sherard".  
Ray's Synopsis II, p.19 (1696).

(Sp. ined.)

Down, c. 1690 - 1694, W. Sherard.

"Fungus pileatus major, superne coloris castanei lamellis candidis caule maculato...D. Sherard. In the County of Down Ireland".  
Ray's Synopsis II, p.12 (1696).



ALGAE

Delesseria sanguinea (Huds.) Lamour.

Ireland, ante 1687, Dr. Alan Mullen (Moulins)

"Alga folio membranaceo purpureo. Lapathu sangunieii figura & magnitudine... the same was shown him Sherard by Mr. Newton gathered in Ireland by Dr. Moulins. Ray's Synopsis I; App.236(1690)

Rhodymenia palmata (L.) Grev.

Ireland, c. 1690-1694, W. Sherard.

"Fucus membranaceus ceranoides. Dulesh Hibernis... Hunc Hiberni, acud quos copiose invenitus, studiose exiccatum & convolutum affidat in ore habent & masticant..." Ray's Synopsis II, p.3 (1696)

"Fucus membranaceus rubens angustifolius, marginibus ligulis armatis. Hiberni Dulesh exsiccatum solummodo edunt per se, sine additione salis alcalisate... ut nos certiores fecit Dr. Sherard LL.D. cum in Hibernia digeret". Ray's Synopsis II, p.329 (1696).

"Fucus tamosis piperis sapore... Pepper-dulse, in Irish called Faminkerin" Dillenius, Ray's Synopsis III, p.51 (1724).

Possibly Callophyllis laciniata (Huds.) Kutz.

Munster.

"Fucus membranaceus ceranodes", Ray's Synopsis II, p.3 (1696).

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MRS. A.L.K. KING - AN APPRECIATION

M.J.P. Scannell

The botanist, Mrs. Anastasia Kathleen King (nee Murphy) died in her home in Mount Merrion on the 28th March 1978 in her 84th year. She was born in Dublin and was educated in the Loretto Convent, St. Stephen's Green and later in Berlin. In her youth her interests centered chiefly in music and drama - she was for a time associated with the National Theatre. She married early in life, Dr. Edward King, Dispensary doctor at Kilmacud, Co. Dublin and after his untimely death she was occupied in rearing and educating their four sons.

Mrs. King entered into membership of the Dublin Naturalists Field Club in 1944. She already had an interest both in gardening and in culinary and domestic plants, now her interest in Nature widened. Like Threlkeld, having for years diverted herself in the 'contemplation of vegetables' her 'inclinations lead' her to the 'Botanic Studies'. In no time she was acting as leader of field meetings in Dublin, Kildare and Westmeath and other counties. She was a good leader, sure of her facts and with a witty delivery. In 1955 she was elected President of the Club.

With the intellectual gifts with which she was endowed, it was inevitable that there would be specialisation, Mrs. King choose the Bryophyta. In her initial study she was guided by Miss Jane Thomson, then in charge of the moss group, who had a good reference collection (now in University College Galway). Mrs. King advanced in knowledge, acquired the basic texts and a microscope, sought membership of the British Bryological Society, collected specimens, exchanged with foreign bryologists and formed a herbarium of c. 4,000 specimens (now in DBN). The distribution of species in Ireland was her first interest but she also paid attention to the ecological aspect. She availed of every opportunity to travel to collect, visiting many counties and searching especially those areas which were underworked or unknown in the literature and with the express purpose of filling out county census lists. Mrs. King seldom returned

from the field without a new county record - or a spate of county records. At lunch on the next field meeting members would be told of the discoveries, and would be regaled with an account of the terrain covered, the search for species, the seeking in the books to establish identity, then confirmation by Bryological Society referees. All were familiar with the names of these botanists, Crundwell, Fitzgerald, Paton, Warburg and others.

The material collected was worked out in conjunction with Dixon and Macvicar. Later Rabenhorst, Gams and Müller were acquired. Mrs. King's excellent command of the German language allowed such works to be consulted with ease, and additional information was gained on distribution and habitat preferences in mainland Europe. Subspecies and variants listed in these works were sought in the flora of Ireland.

At the height of her interest Mrs. King's field programme ran somewhat as follows, Saturday with the Dublin Naturalists Field Club, Sunday with the Society of Irish Foresters and mid-week with a friend in perhaps, Kilbeggan bog. The remainder of the week was spent in working through the material collected, in naming, sorting for exchange or critical determination, packeting and documentation, - then the pattern started all over again. Mrs. King was a meticulous and careful scientist. She worked in isolation, and on finding that the plant collected was a new county record she would phone in great excitement, to tell friends - justified pleasure in a good performance. At the time when she was pursuing her hobby with zeal, Mrs. King was acutely aware that in the short botanic season one cannot be in two places at once, so while she attended a field meeting in Kerry, those going on holidays elsewhere was detailed to collect mosses, and instructions were issued as to the best places to try. She looked forward to such bags of mosses and invariably found specimens of interest.

The result of the work was published in short papers and notes in the Irish Naturalists Journal. Like Praeger, Mrs. King committed to print what she had observed. The first note appeared in January 1950, it

was entitled, 'Brachythecium caespitosum in Co. Cavan', and reported a new county record and the third locality for the species in Ireland. The last paper appeared in July 1970, it was entitled, 'Recent additions to the Irish bryophyte census lists'. In this, several county records were reported, - 39 species on which 8 were hepatics, 3 sphagna and 28 mosses. For this paper, Mrs. King assembled accumulated unpublished finds with field notes for permanent record, thus attending to 'things left undone'.

Mrs. King dominated field bryology in the 1950's and 1960's. She was at that time much in demand by research workers in the Universities for help in determining species encountered in the course of ecological surveys, and by semi-State bodies, as Bord na Mona, for help in determining the constituents of the scraws of various bogs. Camptothecium nitens was recognised in the course of this work in several midland bogs. In 1956 a joint paper was published in conjunction with a young post-graduate worker of Queen's University, Belfast, M.E.S. Morrison whose death at an early age in Uganda is a great loss to Irish botany. The paper, 'Sphagnum imbricatum in Ireland' dealt with aspects of the distribution of this species.

Mrs. King added several species to the flora of Ireland, Nardia geoscyphus, Pohlia rothii and Ptilidium pulcherrimum.

The most interesting addition, Meesia tristicha, a sub-arctic zone moss, was discovered in an iron-flush in blanket bog, Bellacorick, N.W. Mayo in 1957. Previously it was known in the British Isles only as a subfossil in deposits in Somerset. The discovery was reported in detail by E.F. Warburg in 1958 in Transactions of the British Bryological Society. In The Bryophytes of the Pleistocene (1973) - the British Record and its chorological and ecological implications, - a work which relates the understanding of the bryophlora in historical terms, J.H. Dickson refers to the Bellacorick plant and includes the list of associated flora reported by King and Scannell in the Irish Naturalists Journal (1960). In 1970 it was suggested to Mrs. King that she publish an outline flora of the bryophytes of county Dublin, but she considered she had not



covered the area in a systematic manner.

Flowering plants were a continuing interest and county records were noted, as Impatiens glandulifera, reported new to H3, H29 and H31. In 1961 the Dublin Naturalists Field Club published (in conjunction with the National Museum of Ireland), A Supplement to Colgan's Flora of the County Dublin, Mrs. King was one of the five joint authors. She was associated with the discovery in 1957 of Saxifraga hirculus in a new station in West Mayo, at Bellacorick, - at present, known only in Ireland from the Garron plateau in Antrim. An interest was taken in lichens and specimens collected were donated to the Herbarium. Other reports included the sighting of a pine martin while 'cycling along a boreen' near Lanesboro in 1952. She had a good knowledge of trees.

Mrs. King was a person of slight build, about 5'6" in height. She appeared fragile, - an impression conveyed by a fine bone structure, but Mrs. King was in no way frail. She had tremendous stamina, often covering many miles of rough terrain in one day (it was reckoned that 25 miles were travelled on one occasion), and she was never known to me to develop flu' or cold even after a thorough wetting. She was a well organised person, coming to a field meeting with equipment for the particular foray yet never encumbered with paraphernalia; she carried a nutritious lunch and a flask with enough for an afternoon cup of tea. A second visit to Bellacorick is remembered. The mineral flush on the bog was approached from a different direction than on a previous visit. Four miles of rough track brought us near the area yet after casting around for hours we still were not on the ground we sought, also with windspeeds of 60 - 70 mph in this featureless region we were at times almost swept into the soft parts of the bog. Mrs. King decided not to go on so sods were piled up as a shelter and in the lee of this she awaited the return of her co-worker, in the meantime examining and sorting the collection made thus far. It was then difficult to relocate Mrs. King!! Eventually with work completed we returned much later than planned and hurried to catch the transport, yet Mrs. King would make short runs into the bog to examine promising patches. Sensing her companions impatience she



would say "we should look at everything while we are here, the opportunity to revisit may not occur". On the homeward journey (to Belmullet) Mrs. King made constant chat after what was a very tiring day, she discoursed on the day's takings, on her fellow-travellers, she announced recipes for preserves and gave her views on current affairs - she never flagged, never closed her eyes, never dozed (- I believe this last condition was unknown to ALKK). She had great reserves of mental energy and retained this facility to her death.

Rising inflation must have affected a fixed income, yet Mrs. King managed, eliminating unnecessary extras but not bryological literature nor membership of scientific societies. She succeeded, 50 years experience as a practising housekeeper helped. But friends were concerned about a slender income and, aware of her broad interest in nature and ability with the pen urged her to write for newspapers and magazines, but Mrs. King had no desire to be a naturalist-journalist, she would say, "No, you would have to do too much polishing for that type of writing, I prefer to give my time to the mosses". She did this for 20 well-filled years and left to Irish science a permanent contribution, a contribution in print and fact to Bryological studies - a Heritage Trust.

Mrs. King held membership of many societies, including the Royal Dublin Society, Geographic Society of Ireland, Society of Irish Foresters, British Bryological Society, Dublin, Naturalists Field Club, Irish Naturalists Journal (Subscriber), Irish Roadside Trees Association (hon. sec. in 1950 with a committee comprising amongst others, Professor T. Clear, Professor M.J. Gorman, Mrs. A. Henry and Dr. T. Walsh) and An Taisce (Hon.Sec. from 1959) - She served for periods on the committee of many of the societies mentioned.

Mrs. King was a determined person, not shy about making her views known. She was critical of some local botanists and at times was sharply critical of botanic institutes in Ireland. Her criticism was really a concern that there were too few cryptogamic botanists working one of the most interesting regions in western Europe, a statement that there was

too little involvement by professional workers in field botany, and a strong desire to see the situation improve. She herself used her talents to full advantage and maintained high standards.

A.L. Kathleen King (she signed herself thus), has set a standard for amateur botanists in Ireland.

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